Contesting the Inevitability of Scoring:
The Value(s) of Narrative in Consumer Credit Allocation

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When firms allocate credit to consumers, credit scoring often seems both inevitable (how else could the decision be made?) and desirable (how else could the decision be objective and fair?). This article challenges both of those assumptions, after exploring the power asymmetries generated by scoring. Evaluation of narrative accounts of creditworthiness is plausible in at least some scenarios, despite the volume of credit applications. Moreover, these alternative paths to credit reflect normative values (such as intelligibility and fair consideration) that are just as compelling as the objectivity and fairness attributed to scoring.

One of these values is trust. While quantitative assessments of reliability based on third-party data are designed to enable "trustless" transactions, qualitative accounts of creditworthiness depend on evaluators' trusting the accounts of creditworthiness offered by those applying for credit for themselves. What this shift potentially loses in efficiency it has the potential to gain in mutual understanding, the alleviation of alienation, and opportunities for redemption. It also represents a democratization of power in financial relationships, requiring those with funds to lend to do a bit more to understand at least some of those applying for credit on their own terms, rather than forcing applicants into Procrustean beds of data analytics.

A. Introduction

The usual rationale for scoring is to replace the alleged imprecision and subjectivity of human judgment with the objectivity of machine calculation. However, there is human judgment in any evaluative system; the judgment is simply at a remove in most cases of machine scoring, reflected in decisions about what data to include and how to analyse it. The real target of scoring appears to be natural language. The words of credit histories are replaced with numerical data, as the allegedly subjective thought and

127

writing of loan officers are displaced by the exacting and automatic logic of code and mathematics.

Both industry analysts and finance academics have celebrated this shift as a step toward more fair and inclusive banking. However, critics have documented problems of inaccurate, biased, or inappropriate data used in scoring systems old and new.[1] This has in turn led to numerous efforts to reform scoring via law, aimed at improving the accuracy, representativeness, and propriety of data used. This chapter suggests a complementary direction for the fields of algorithmic accountability and fairness in machine learning: the exploration, explication, and prescription of narrative approaches as alternatives to scoring systems for some subset of applicants rejected by automated decision-making. Rather than only trying to critique (and by implication improve) credit scoring, scholars might also articulate language-driven evaluative practices to be used in alternative paths to credit.[2] Articulation of scoring's "other" (here generalized as narrative) will also assist researchers seeking to better understand scoring—and may even reveal patterns that allow quantitative analysts to improve scoring itself. Such narrative paths to credit may also vindicate dignitary interests of applicants long noted by scholars of procedural justice in the context of adjudications.[3]

The modesty of our claims should be noted at the outset. We are not introducing narrative accounts of creditworthiness as a panacea for the shortcomings of scoring. The sheer volume of applications for credit would make it impossible to replace scoring with narrative. Nor are we arguing that narrative would outperform scoring on any particular metric. Rather, we introduce it below as a way of illuminating shortcomings in scoring, and potentially addressing critical concerns of some of those marginalized by scoring systems if they wish to make their case via an explanation of their creditworthiness. We examine and recommend alternatives to scoring in a spirit of consumer empowerment and social experimentalism, demonstrating that well-designed narrative-driven application processes may well lead to the discovery of data and patterns that improve scoring itself.

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1 Pamela Foohey and Sara Greene, 'Credit Scoring Duality' [2021] 85 Law and Contemporary Problems 101.

2 Frank Pasquale, 'Power and Knowledge in Policy Evaluation: From Managing Budgets to Analyzing Scenarios' [2023] 86(3) Law and Contemporary Problems.

3 Pamela Foohey, 'A New Deal for Debtors: Providing Procedural Justice in Consumer Bankruptcy' [2019] 60(8) Boston College Law Review.

Part B below motivates the chapter by documenting the prevalence of problematic data and decisions in financial scoring systems. Part C characterizes the dominance of scoring in consumer credit as a cognitive monoculture and explores the practical advantages of a limited re-introduction of narrative accounts of creditworthiness provided by applicants themselves. Part D addresses objections to such narrative evidence of creditworthiness, while Part E makes the case for valuing them not only on instrumental, but also on intrinsic grounds. Part F concludes with reflections on how the articulation of practical alternatives to algorithmic evaluation processes may promote a more refined critical theory of automated decision making.

B. Normative and Practical Shortcomings of Scoring

In the rapidly evolving landscape of credit scoring, where algorithms powerfully influence financial opportunities, a critical concern has emerged: while credit scoring systems are touted as objective and fair, their users operate within legal frameworks riddled with ambiguities and limitations.[4] For example, while "alternative credit scoring is often presented to applicants as a 'second chance' after they have been denied credit based on a traditional credit score," the reality for many is "coerced surveillance and predatory inclusion".[5] Regulators and consumers may also find it difficult to apply existing laws to many alternative forms of credit assessment because of new data sources and technologies that these alternative tools use.[6] As law professor and sociologist Ifeoma Ajunwa has demonstrated, "in some instances, automated decision-making has served to replicate and amplify bias".[7]

The lack of transparency in proprietary algorithms raises significant concerns about privacy and accuracy. Even when borrowers can understand key aspects of the data and algorithms used to deny them credit (or offer it on substandard terms), there are further shortcomings of algorithmic

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4 Janine Hiller and Lindsay Jones, 'Who's Keeping Score? Oversight of Changing Consumer Credit Infrastructure' [2022] 59 Am Bus Law J. 61.

5 Lindsay Sain Jones and Goldburn Maynard Jr., 'Unfulfilled Promises of the Fintech Revolution' [2023] 111 California Law Review 801.

6 Mikella Hurley and Julius Adebayo, 'Credit Scoring in the Era of Big Data' [2016] 18 Yale Journal of Law and Technology 148.

7 Ifeoma Ajunwa, 'The Paradox of Automation as Anti-Bias Intervention' [2020] 41(5) Cardozo Law Review 1671.

scoring unlikely to be addressed under current law. Many laws were created before the digital age and do not address the complexities of modern credit scoring, especially concerning the use of big data and AI algorithms, leaving consumers vulnerable to unfair practices.[8] As law professor Nikita Aggarwal has observed, "The growing reliance on consumers' personal data by lenders, coupled with the ineffectiveness of existing data protection remedies, has created a data protection gap in consumer credit markets that presents a significant threat to consumer privacy and autonomy".[9]

Several reforms internal to algorithmic processes have been proposed to address these issues, ranging from mandates for more representative data to new algorithmic methods. However, these reforms are still premised on computational thinking: understanding human behaviour and solving social problems by drawing on "concepts fundamental to computer science".[10] Evaluating abilities and proclivities through performance-based metrics is a nearly-universal assumption of the reformist literature on credit scoring in both the legal field, and emerging academic communities like the Association for Computing Machinery's Conference on Fairness, Accountability, and Transparency (ACM FAccT).

Credit scoring systems exemplify computational thinking by integrating abstraction, reduction, and decomposition to treat applicants like "algorithmic selves".[11] It reduces the applicant to a series of data points and comparisons, rather than the type of "enstoried" self the applicant herself might narrate.[12] Credit scoring is premised on a narrow definition of problem-solving and system design, leveraging vast amounts of data (often secret) and statistical models (often proprietary) to make lending decisions, embodying the analytical strategies that Jeannette Wing has described as essential to computational thinking.[13] Thus algorithmic scoring will require applicants for credit to remain dependent on certain aspects of a digital persona that is difficult to control, or even access. By contrast, a narrative

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8 Frank Pasquale, *The Black Box Society* (Harvard University Press 2015).

9 Nikita Aggarwal, 'The norms of algorithmic credit scoring' [2021] 80(1) Cambridge Law Journal 42.

10 Jeannette Wing, 'Computational thinking' [2006] 49(3) Communications of the ACM 33.

11 Frank Pasquale, 'The Algorithmic Self' [2015] 17(1) The Hedgehog Review.

12 Christian Smith, *Moral, Believing Animals: Human Personhood and Culture* (Oxford University Press 2003).

13 Jeannette Wing, 'Computational thinking' [2006] 49(3) Communications of the ACM 33.

account of creditworthiness allows its author to apprehend and reason about aspects of her own life and experience that are close-to-hand. It is in this sense a form of lifeworld-based resistance against systemic colonization.[14]

To be sure, the importance of offering consumers access to their credit data cannot be overstated; such access signifies a shift from opacity to transparency, and when successfully used for advocacy, from helplessness to empowerment. Consumers, armed with the ability to scrutinize their credit data, can identify, and rectify errors based on their statutory rights. This proactive involvement not only ensures the accuracy of individual credit reports, but also holds credit reporting agencies and financial institutions accountable for the data they collect and utilize. However, even if credit applicants were able to access all of the data used to judge them, and could assure it is accurate, appropriate, and non-discriminatory, those adversely impacted by computational evaluation systems may have good grounds for believing that the system has not taken into account all potential positive or crediting information about them.[15] A vast amount of our actions, words, proclivities, and other characteristics are never captured in data that is available to those deploying credit scoring systems. Nor could they be; to argue otherwise is to entertain the possibility of truly invasive surveillance, an "omni-opticon" that does not seem worth building in a society giving even a scintilla of value to privacy.

Finally, even if we can imagine a hypothetical realm where a critical mass of concerns about inaccurate and inappropriate data are resolved, the subjective experience of an entirely computationally administered realm of credit may be very corrosive. Legal scholars have discussed the grounding of a right to a human decision in human rights law.[16] But one need not believe in an inalienable right to a human decision in order to recognize that there are certain situations that simply demand some level of personalized

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14 Jürgen Habermas, The Theory of Communicative Action II: Lifeworld and System: A Critique of Functionalist Reason (Thomas McCarthy trans., Beacon Press 1987).

15 Katrina Geddes, 'The Death of the Legal Subject: How Predictive Algorithms Are (Re)constructing Legal Subjectivity' [2023] 35 Vanderbilt Journal of Entertainment & Technology Law 25.

16 Yuval Shany, 'The Case for a New Right to a Human Decision Under International Human Rights Law' [2023] Working Draft (SSRN: https://ssrn.com/abstract=4592 244).

response.[17] Critiques of alienation have been developed in critical theory and sociology for over a century, and they have a renewed relevance when machines judge humans.[18]

The foundation of such concerns about alienation lies in the subjective experience of meaninglessness and powerlessness.[19] Meaninglessness can in turn be analytically decomposed into at least two other dimensions. First, when computational evaluative methods are strictly protected via trade secrecy, or are too complex to be meaningfully explained, they cannot be reliably interpreted. Whereas an explicable evaluation provides some level of guidance as to how one can behave in the future in order to obtain a better outcome, inexplicable ones can leave their subjects unable to understand how they fell short in the past, and how they can do better in the future. Second, even if all factors are explained, there is often a sense of injustice sparked by a realization of how arbitrary the connection between states of affairs in the world and numbers meant to represent them can be.

The site "How Normal am I" offers some jarring examples of this flattening reductionism (HowNormalAmI.eu, 2022). It will, for example, generate an attractiveness score for any user between one and ten. No rationale is offered for the score. Of course, there is a burgeoning literature of academic and quasi-academic accounts of facial symmetry, and similar rationales for such evaluation. But in common experience, the diversity of such evaluations is well understood: beauty is in the eye of the beholder. Flattening all such evaluations into a single number on an ordinal scale introduces what might be called a curse of two-dimensionality: a dangerous compression of complex qualitative judgment into a since metricized scale. More dangerously, it can lead to a homogenization of evaluations once those whose apprehension of a given quality are now outliers, learn about a generalized score, and start to adjust their own opinions accordingly.

Aside from these concerns about meaninglessness, powerlessness is also a separate, but intertwined, aspect of the problem of alienation. Although decisions with respect to hiring, job performance evaluation, credit determination, and educational admissions, should not be as hedged in by due process protections as, say, a criminal trial, they nevertheless have some

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17 Kiel Brennan-Marquez, Karen Levy, and Daniel Susser, 'Strange Loops' [2019] 34(3) Berkeley Technology Law Journal 745.

18 Frank Pasquale, New Laws of Robotics (Harvard University Press 2020).

19 Melvin Seeman, 'On the Meaning of Alienation' [1959] 24(6) American Sociological Review 783.

juridical character. The power of the litigant in a courtroom consists in the ability to challenge the case against himself, and to advance his own account of the application of legal standards to facts. A subject of credit scoring who has been given no such ability, thanks to computational decision-making, senses a loss of power relative to older forms of evaluation, which at least offered some forms of intelligibility. It is a particularly total and technical form of "private governance," in philosopher Elizabeth Anderson's memorable formulation.[20]

C. Normative and Practical Advantages of Narrative Accounts of Creditworthiness

None of the above arguments should be taken as a blanket condemnation of the use of credit scoring in evaluations of persons. There are, of course, many ways in which it has improved on older forms of evaluation. Nor is a "right to a human decision" normatively desirable in all of the contexts mentioned above.[21] Some decisions are simple enough to be automated in so many instances that the cost of avoiding errors or inappropriate actions is so small, relative to the cost of human intervention, that it makes little sense to provide human review in every decision scenario.

Nevertheless, the decision here is not between *always* automating decisions, or *always* putting a human reviewer in the loop. Rather, it is possible to imagine varied middle grounds.[22] For example, there may be a lottery or sortition to decide who, among those rejected by an automated system, is able to press their case to a human decisionmaker with the right to override the automated decision. Such a lottery might be imposed at the beginning of a decision-making process, too, giving some percentage of applicants the opportunity to make their case narratively, or in person, bypassing the algorithmic evaluation entirely. For example, bank regulators could require mortgage lenders to permit, say, 1% to 10% of applicants to have the option to bypass algorithmic assessment, and to have their application judged holistically by a loan officer. Applicants previously rejected by an algorithmic assessment would be most likely to take advantage of

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20 Elizabeth Anderson, Private Government: How Employers Rule Our Lives (and Why We Don't Talk About It) (Princeton University Press 2017).

21 Aziz Huq, 'The Right to a Human Decision' [2020] 106 Virginia Law Review 611.

22 Rebecca Croot of, Margot Kaminski, and Nicholson Price, 'Humans in the Loop' [2022] 76 Vanderbilt Law Review 429.

such an opportunity. Alternatively, 1% to 10% of rejected applicants might automatically be given this opportunity to draft a narrative appeal of the decision against them.

Varied rationales may emerge from narrativization. For example, a consumer applying for a car loan to gain access to a more profitable or specialized job opportunity might benefit from the opportunity to explain this situation in a written statement. A family seeking credit for a particular housing situation could gain from submitting a detailed account of their ability and willingness to pay. Lenders might develop processes that guide applicants toward useful narratives by prompting them with specific questions, requesting relevant documents, and asking for written personal statements. Video testimony may also allow individuals to convey their circumstances in a more personal manner. Allowing multiple formats would allow a wider array of applicants to effectively communicate their story.

The great advantage of narrative explanations from borrowers themselves is that they can reflect the kaleidoscopic complexity of contemporary life. Indeed, the openness of narrative may be the only way to fairly implement what Cen and Raghavan call the "right to be an exception to a data-driven rule".[23] Designers of an algorithmic system can only try to anticipate relevant factors; an invitation to self-explanation invites in the wisdom of crowds, as well as their apprehensions of meanings of events rarely if ever captured in automated data gathering. Consider the Consumer Financial Protection Bureau's call for narrative complaints about financial institutions, which created a very useful source of information for regulators.[24] It represents useful advocacy on behalf of consumers to give them an opportunity to be heard. Financial institutions could be required to give such opportunities to some portion of applicants as well, re-inscribing juridical conceptions of fairness in scenarios from which they have long been unduly evacuated.

Given past work categorizing and analysing narratives of creditworthiness on niche peer-to-peer lending sites like Prosper, many modes of

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23 Sarah Cen and Manish Raghavan, 'The Right to be an Exception to a Data-Driven Rule' [2022] ArXiv <https://arxiv.org/abs/2212.13995>.

24 Matthew Bruckner and CJ Ryan, 'The Magic of Fintech? Insights for a Regulatory Agenda from Analyzing Student Loan Complaints Filed with the CFPB' [2022] 127 Dickinson Law Review 49; Matthew Bruckner, and CJ Ryan 'Student Loans and Financial Distress: A Qualitative Analysis of the Most Common Student Loan Complaints' [2023] 35 Loyola Consumer Law Review 203.

self-presentation have been documented.[25] Given narrative's range and scope, any particular sketch of a compelling narrative can only suggest the contours of insight available. Nevertheless, four concrete examples might be useful in demonstrating the value of such first-person accounts of creditworthiness.

First, consider the plight of a large, multigenerational family of low-income persons applying to buy an eight-bedroom home. Existing credit scoring systems may only assess the creditworthiness of one person, or a couple, when credit is sought. While the whole family unit together may have more than enough income to pay the mortgage, any particular person or couple within it may be considered far from qualified considered alone. This may in turn be exacerbated by their suffering a relatively thin credit file with respect to large purchases. An alternative system, allowing an applicant to explain the entire family's situation, could easily lead to a loan decision that would be welfare-enhancing all around.

Second, consider the challenges faced by immigrants in accessing credit, despite potentially having a strong credit history in their country of origin, thanks to the difficulty of transferring such crediting information to credit bureaus in their new home. Traditional credit scoring systems might categorize them as high-risk due to the lack of a domestic credit file. A narrative approach would enable immigrants to share their financial history, including credit status and repayment behavior in their home country, as well as their reasons for immigration, professional skills, and employment prospects.

Third, student loan debt may create a misleading impression when unaccompanied by more granular data about the value of an applicant's degree and training. Traditional credit scoring can easily penalize recent college graduates who have invested in their education and have high earning potential, but are burdened early in their career with student loan repayment. Adopting a narrative approach could allow these individuals to explain their career trajectory, their field of study, and the expected increase in their income as they gain experience. This perspective could provide a more

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25 Michal Herzenstein, Scott Sonenshein, and Uptal M. Dholakia, 'Tell Me a Good Story and I May Lend You Money: The Role of Narratives in Peer-to-Peer Lending Decisions' [2011] 48 Journal of Marketing Research S138; Laura Larrimore, Li Jiang, Jeff Larrimore, David Markowitz, and Scott Gorski, 'Peer to Peer Lending: The Relationship Between Language Features, Trustworthiness, and Persuasion Success' (2011) 39(1) Journal of Applied Communication Research 19.

135

nuanced understanding of their financial situation and future ability to manage and repay debt.

A final narrative example revolves around the kind of debt or delinquencies a person may have accumulated. For many years, credit bureaus in the U.S. have reported medical debt like any other debt, despite its often unpredictable occurrence and occasionally devastating (but temporary) impact on the debtor's ability to work and pay off debt. A narrative accounting of the *reasons* for a delinquency may stimulate sympathy from a loan officer, or even self-interest—the realization that the applicant is far less likely to default again than someone who wilfully refused to pay back a debt. In this way, narrative has the potential to make credit determinations a more morally intelligible process, rather than a realm of abstract, mathematicised prediction.

Mandates for consideration of such alternative, narrative evaluations are helpful in a further way. Considering algorithmic systems as socio-technical assemblages that evolve over time, new and unexpected types of data derived from alternative, narrative systems of evaluation may help improve the performance of the algorithmic system. It is simply impossible for such a system to "know" all there is to be ascertained about any set of persons. Data from alternative systems will thus help alleviate the familiar problem of cognitive monoculture: the fragility that can result when a given firm or set of firms relies too heavily on one particular way of apprehending the world which may become outdated over time. As Amar Bhide has observed, the rapid, imitative adoption of similar algorithms by financial institutions for the assessment of mortgage applicants contributed to the financial crisis of 2008.[26] Alternative modes of evaluation could have suggested more robust classifiers, or helped uncover the wishful thinking that lay behind many "no income, no job or assets" borrowers who ultimately defaulted on their loans. Empirical research has already demonstrated the complementarity of quantitative data and narratives, concluding that supplementing the former with the latter enables more accurate prediction of defaults.[27] Mandatory consideration of narratives could further enhance this effect.

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26 Amar Bhidé, A Call for Judgment: Sensible Finance for a Dynamic Economy (Oxford University Press 2010).
27 Yufei Xia, Lingyun He, Yinguo Li, Nana Liu, and Yanlin Ding, 'Predicting Loan Default in Peer-to-Peer Lending Using Narrative Data' [2020] 39 Journal of Forecasting 260.

136

D. Addressing Objections

Admittedly, at least four objections may be lodged against even a limited re-introduction of narrative accounts of creditworthiness. First, allowing some applicants to put their case narratively, while denying that chance to others, may seem unfair to those who are not given a narrative "second chance." Second, from a very different perspective, those who take a more positivistic orientation toward credit scoring may argue that the grant of credit is optimally a value-free process, free of value-laden narratives. Third, there is a concern that narrative evaluation is more susceptible to discrimination than that constrained by "hard" data and algorithmic processes. Fourth, there is a fear that narrative writers will game the system, using rhetorical strategies unconnected to either creditworthiness or normative values in order to tilt the evaluative playing field in their favour. We address each concern below.

First, on a "horizontal" level, sortition to determine which applicants are able to present their case narratively may seem unfair. Some percentage of applicants would receive a privilege that the rest do not enjoy. One way to mollify this effect would be to preferentially open the narrative option to those who have already been rejected by an automated credit scoring system. In this way, the narrative, non-algorithmic option is reserved first for those who have already been disadvantaged by dominant, algorithmic systems. True, their disadvantage may have been "deserved" in some sense; for example, someone who has wilfully refused to pay back loans may find future credit options restricted or non-existent. However, it is difficult to see how we could truly determine "desert" even in those scenarios without some opportunity for the person affected to make the case that they had committed to a different behavioural path in the future. Non-algorithmic, narrative accounts of oneself are one way to offer such a second chance. They are especially necessary as the weight of data about past conduct exerts more influence on individuals as surveillance and data recordation become more persistent, encompassing, and accessible.[28]

The mention of "merit" above may give rise to a second objection: That we have mistaken an empirical process of assigning capital to its most profitable use, for a normative evaluation of the worth of persons. The rationale for alternative modes of evaluation is strongest if we think of a

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28 Arvind Narayanan, 'The urgent need for accountability in predictive AI' [2023] <https://www.cs.princeton.edu/~arvindn/talks/insight_forum_statement.pdf>.

given credit opportunity as something that an applicant deserves. But even persons with perfect scores on their exams do not always obtain entrance to the university they consider the best. Nor is it easy to articulate a rationale for why some subset of, say, one thousand applicants for ten loans, are clearly more deserving than those who were ultimately chosen. Viewed from a value-free perspective, the choice of applicants is simply a pattern matching problem. From an even more positivistic perspective, the market will ultimately punish those entities which are using inappropriate systems, as the only test of the validity of the system is its ability to advance the commercial interests of the firm using it.

There are at least two responses to such a tough-minded perspective on credit scoring based on big data and AI. First, there is always a plurality of values at stake in any automated decision-making system. As sociologist and law professor Ari Ezra Waldman has argued, "We need a robust, substantive approach to ensure that algorithmic systems meet fundamental social values other than efficiency".[29] These systems do not exist simply in order to advance the key performance indicators of the entity imposing them. It is legitimate for authorities to ensure that credit scoring is in some way responsive to social concerns, even if this results in a system that does not maximize profits. Profit maximization is often narrow and distortive in its own right, and has never been the exclusive object of well-functioning financial systems.

Furthermore, even if it is assumed that the maximands and key performance indicators now driving big data and AI driven credit scoring systems capture all relevant social values, there still is a case for implementing alternative mechanisms for choosing applicants, to better advance such values. No such system will be able to encompass all potentially relevant data as it determines who will be most likely to maximize its key performance indicators. Alternative evaluation systems permit applicants to nominate their own categories of potentially relevant data. For example, consider the possible rationales that may be given by applicants offering narrative accounts of why they deserve to be given a loan. They may focus on aspects of their own reliability that are now overlooked by algorithmic ranking and rating systems. For example, a person may note that they always send cards to their friends two weeks before their birthdays. If a pattern emerges, whereby some critical mass of alternative applicants brings up this self-nominated

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29 Ari Ezra Waldman, 'Power, Process, and Automated Decision-Making' [2019] 88 Fordham Law Review 613.

indicator of reliability, and it turns out that it is indeed correlated with reliable repayment of a loan, then developers of the algorithmic system may in turn try to incorporate such data in future versions of their algorithms. In this way, alternative evaluation systems assist mainstream credit scoring to move from local to global maxima, continually highlighting the type of data that may be useful, but at present left out of, existing databases.

A third objection arises out of the history of narrative in consumer credit, focusing on the original public service rationales for moving toward "hard" data. While rapid numerical evaluations of credit history could be reductive, they also tended to be less privacy-invasive than credit bureaus' narratives, and more resistant to discriminatory construction or interpretation. As Professor Kenneth Lipartito helpfully recounts, "For all the dangers posed by databanks in a free society, their potential to eliminate traditional forms of discrimination through hard data, combined with the efficiency they offered to credit granters, made them appear more equalitarian and less liable to abuse than traditional methods that emphasized character and the narrative of lifestyle".[30] Empirical research on recent uses of narrative in consumer credit offers some confirmation of this concern. For example, one study of a peer-to-peer lending site that permitted would-be borrowers to include their picture with their profile found "evidence of significant racial disparities," as "listings with blacks in the attached picture [were] 25 to 35 percent less likely to receive funding than those of whites with similar credit profiles".[31] Direct or indirect references by applicants to their gender, race, religion, sexual orientation, or other protected class characteristics may lead to discriminatory decision-making by those who evaluate narratives.

It is important to address this risk. Finance regulators should require credit-granting entities to release aggregate reports on the relative percentages of denials with respect to each protected class. If the narrative portion of credit determination was resulting in disparately negative impacts with respect to minorities, penalties could be imposed. Auditors may also require decisionmakers to give an account of how they decided on particular narrative applications, to ensure that non-discriminatory reasons were decisive.

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30 Kenneth Lipartito, 'The narrative and the algorithm: Genres of credit reporting from the nineteenth century to today' [2010] 2010 Harvard Business School History Seminar.

31 Devin Pope and Justin R. Sydnor, 'What's in a Picture?: Evidence of Discrimination from Prosper.com' [2011] 46(1) Journal of Human Resources 53.

Though narrative determinations may seem more amenable to discrimination than quantitative ones, it is important not to overstate this case. Many of the data points critical to quantitative determinations may themselves have been shaped by discrimination. Moreover, narratives' construction and interpretation are far less susceptible to the "black box" and trade secrecy problems that so often confound regulation of algorithms. On this ground alone they offer a more egalitarian mode of evaluation. As Jenna Burrell thoughtfully explains, with respect to "second chance" narrative appeals similar to the ones we propose:

A citizen can appeal to a clerk at the Department of Motor Vehicles, try to explain a misunderstanding to a social worker, or describe exceptional circumstances to a judge or a jury and, in these very human ways, challenge bureaucracies or leverage human judgment and discretion within systems of rules. Skills of human communication and persuasion vary by individual. However, there are far fewer of us who are capable of communicating with or understanding automated decision-making tools. With wider use of automation, important human skills and ways of acting and doing in the world are at risk of being displaced.[32]

The explainability of narratives and their evaluation offers a path to contestation (with respect to discrimination, or on other grounds) that is all too often lacking in the case of trade secret protected, black boxed algorithms. On this ground alone, those concerned about problems of discrimination should welcome what we propose: the limited re-introduction of narrative on the initiative of consumers denied credit algorithmically.

The fourth objection, focused on gaming, is familiar from the realm of algorithmic credit scoring. One of the main reasons that scoring entities refuse to reveal their methods is a professed fear that some applicants will strategically alter their behavior to gain advantage over others, by changing their behavior in ways that conform to the record of optimal applicants, but which are not actually signs of increased creditworthiness in their case. As empirical studies of narrative-driven credit evaluation develop, the same may happen in the case of qualitative accounts of creditworthiness. For example, one study of European peer-to-peer lending found that successful narratives often featured orthography (proper spelling) and positive

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32 Jenna Burrell, 'Automated Decision-Making as Domination' [2024] 29(4) First Monday.

emotional terms.[33] A study of narratives offered on Chinese peer-to-peer lending site Renrendai concluded that negative sentiment reduced the likelihood of credit offers.[34] If such studies became widely known, they could encourage inauthentic self-presentation, or corrode the signifying power of characteristics like orthography.

Our response to this objection is necessarily ambivalent. Modulating self-expression to please the powerful is a real harm to autonomy. However, strategic self-presentation is also a mainstay of modern life).[35] If applicants are incentivized to become better spellers strategically, there is probably little to complain about: this skill will help in other situations (such as employment applications) as well. Similarly, the authenticity (and thus normative value) of expressions of negative affect can be fruitfully questioned. Sometimes the construction of a more positive self-presentation may be useful to the credit applicant, a route to hope via reflection. Nevertheless, we do acknowledge that further study of the self-shaping effects of narration is warranted.

E. The Intrinsic Case for Narrative Accounts of Creditworthiness

We have so far made the case for narrative accounts of creditworthiness in largely instrumental terms, emphasizing how they could assist rejected applicants, and advance the key performance indicators and other goals of the implementers and regulators of algorithmic systems. We now turn to an intrinsic case for narrative accounts of creditworthiness. This intrinsic case is built on the merit and value of narrative in human reasoning in general. It also rests on the normative value of an "opportunity to be heard" familiar from literature on due process.[36]

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33 Gregor Dorfleitner, Christopher Priberny, Stephanie Schuster, Johannes Stoiber, Martina Weber, Ivan de Castro, and Julia Kammler, 'Description-Text Related Soft Information in Peer-To-Peer Lending–Evidence from Two Leading European Platforms' [2016] 64 Journal of Banking & Finance 169.

34 Jing-Ti Han, Qun Chen, Jian Guo Liu, Xiao-Lan Luo, and Weiguo Fan, 'The Persuasion of Borrowers' Voluntary Information in Peer to Peer Lending: An Empirical Study Based on Elaboration Likelihood Model' [2018] 78 Computers in Human Behavior 200.

35 Erving Goffman, *The Presentation of Self in Everyday Life* (University of Edinburgh Social Sciences Research Centre 1956).

36 Sara B. Tosdal, 'Preserving Dignity in Due Process' [2011] 62(4) Hastings Law Journal 1005.

Narrative offers a way to reduce the burden of alienation that black box models can impose on those judged by them. As noted above, alienation has at least two subjective dimensions: a sense of powerlessness and meaninglessness.[37] Algorithmic decisions can create a sense of powerlessness when the data subject affected by them feels that they have failed to take into account an important aspect of the situation, and nevertheless the subject is unable to obtain some recognition of that aspect. The finality of a black boxed score is rankling, portending an expertocratic, technocratic decision-making process impervious to challenge.[38] This is one reason why the legitimacy of public administration has always hinged on some combination of expertise, legal regularity, and democratic accountability.[39] Knowledge of *why* a decision was made is just as important as the legitimacy of the decision-making process itself. The problem of meaninglessness entails epistemic frustration: a sense that the decision made was not based on recognizable categories of distinction, but may well have been fundamentally arbitrary or, worse, based on grounds that should be forbidden (such as race or gender).

Narrative channels for evaluation can help address both meaninglessness and powerlessness.[40] First, an invitation to give a narrative account of one's desert—with the concomitant assurance that at least some percentage of submitters will be granted the benefit or status they seek—is a way to connect one's own sense of value with that of powerful institutions. Researchers examining extant narratives in peer to peer lending, a niche areas of consumer finance that does often permit them, have found that extended narratives are often persuasive to lenders.[41] Such lenders realize that there are many worthy and deserving individuals who fall through the cracks of algorithmic sorting systems. However well-designed a complex, automated decision-making system may be, it will still create some number

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37 Melvin Seeman, 'On the Meaning of Alienation' [1959] 24(6) American Sociological Review 783.

38 Frank Pasquale, & Danielle Keats Citron, 'Response and Rejoinder: Promoting Innovation While Preventing Discrimination: Policy Goals for the Scored Society' [2014] 89(4) Washington Law Review 1413.

39 Peter Schuck, 'Multi-Culturalism Redux: Science, Law, and Politics' [1990] 11(1) Yale Law & Policy Review 1.

40 Byung-Chul Han, *The Crisis of Narration* (John Wiley & Sons 2024).

41 Laura Larrimore, Li Jiang, Jeff Larrimore, David Markowitz, and Scott Gorski, 'Peer to Peer Lending: The Relationship Between Language Features, Trustworthiness, and Persuasion Success' [2011] 39(1) Journal of Applied Communication Research 19.

of "losers" who consider their classification not only unfair, but meaningless. Permitting at least some of them a chance to present their merits on their own terms helps alleviate this aspect of alienation.[42]

Of course, narrative accounts of creditworthiness are no cure-all. Regulators are unlikely to require firms to develop alternative evaluation pathways for more than, say, 10% of those rejected by an algorithmic system, and likewise may not be willing to require acceptance of more than 10% of those alternative applicants. Critics may complain that, in such a minimalist implementation, alternative evaluation pathways may only help 1% of those applicants disfavoured by an opaque algorithmic system. However, over the course of a lifetime, a person may be adversely affected by many algorithmic systems. Chances to make one's case may come up many times. Moreover, the very act of making a case for oneself enacts a sense of self-esteem and a sense of self-worth, via articulation of a creditable reputation).[43] It also offers an opportunity for critical self-reflection, since a convincing narrative account will need to take into account rationales that can be accepted by one's audience.

This process of self-assertion is also important for alleviating sensations of powerlessness. The mere knowledge that some authority has recognized the potential unfairness of algorithmic systems—and has given those affected by them an unusual kind of appeal—signals to those excluded by algorithms that some power in society has taken their problems into account. Indeed, narration itself can be a form of power and empowerment.[44] As "story-telling animals", persons will frequently find themselves inclined to relate events causally, in order to find meaning in the past.[45]

Narrative accounts of creditworthiness will also diversify paths to reputational distinction in society, demonstrating that there is more than one way to be recognized as meritorious. A social acceptance of the diversity of merit is one way to address the grave concerns about "meritocracy"

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42 Sara B. Tosdal, 'Preserving Dignity in Due Process' [2011] 62(4) Hastings Law Journal 1003.

43 Michal Herzenstein, Scott Sonenshein, and Uptal M. Dholakia, 'Tell Me a Good Story and I May Lend You Money: The Role of Narratives in Peer-to-Peer Lending Decisions' [2011] 48 Journal of Marketing Research S138.

44 Ken Plummer, *Narrative Power: The Struggle for Human Value* (Polity Press 2019); Benjamin A Rogers et al. 'Seeing your life story as a Hero's Journey increases meaning in life' [2023] 125(4) Journal of Personality and Social Psychology 752.

45 Alasdair MacIntyre, *After Virtue: A Study in Moral Theory* (University of Notre Dame 1981) (London: Duckworth).

expressed in Michael Young's eponymous, satirical book.[46] To "know" one lives in a society where all have been fairly ranked on clear social metrics would be exceptionally demoralizing to those consigned to the bottom of the social hierarchy. Knowing instead that there are several paths to distinction, and that algorithmic ordering is just one of them, is a way of maintaining morale among all those in society, not just its algorithmically chosen "winners." And given that self-perception as a winner or loser often depends on one's chosen comparators, maintaining such morale is important to social integration.[47]

This leads to a final dimension of the intrinsic case for alternative evaluation systems: the epistemic advantage inherent in judgments drawing upon complementary forms of knowledge. Too many advocates of algorithmic decision-making suggest it is part of a historical progression toward rational decision making, where older processes (based largely on narrative description and evaluation) are discarded in favour of more objective, numerical ways of understanding reality. Yet these forms of knowledge ideally complement each other, with distinctive strengths. Consider, for instance trade credit, which still very frequently incorporates methods that are descriptive and qualitative.[48] Lenders know that, in the context of business loans, there is extraordinary variation in risk and opportunity given the variation between entities and irreducibly historical knowledge relevant to each applicant. It is time to bring this awareness to consumer lending as well.

Many scholars have called for reuniting (or at least recognizing the distinctive, respective values of) the "two cultures" of scientific objectivity and humanistic intersubjectivity).[49] For example, the psychologist Jerome

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46 Michael Young, *The Rise of the Meritocracy. London* (Routledge 1961).

47 Robert Frank, *Choosing the Right Pond: Human Behavior and the Quest for Status* (Oxford University Press 1988); Talcott Parsons, [1961] 'An Outline of the Social System' in Craig Calhoun, ed., Classical Sociological Theory (Wiley-Blackwell, 2nd Ed., 2007).

48 Yufei Xia, Lingyun He, Yinguo Li, Nana Liu, and Yanlin Ding, 'Predicting Loan Default in Peer-to-Peer Lending Using Narrative Data' [2020] 39 Journal of Forecasting 260; Kenneth Lipartito, 'The narrative and the algorithm: Genres of credit reporting from the nineteenth century to today' [2010] 2010 Harvard Business School History Seminar.

49 Charles P. Snow, *The Two Cultures and the Scientific Revolution* (Cambridge University Press 1962); on intersubjectivity see Jürgen Habermas, *The Theory of Communicative Action II: Lifeworld and System: A Critique of Functionalist Reason* (Thomas McCarthy trans., Beacon Press 1987).

144

Bruner has drawn a distinction between paradigmatic and narrative modes of reasoning, while insisting on the value of each.[50] For Bruner, the paradigmatic is a largely scientific and analytic mode, whereas narrative is about interpretation, meaning, and synthesis. Tsoukas and Hatch provide a useful set of contrasts between paradigmatic and narrative modes of thought, noting the importance of context and history in the latter.[51] History (not only writ large, but also the sense of self-narration) is a source of resonance and meaning to individuals.[52]

The critical contribution of narrative explanation here is a reconnection between the subjects of credit systems and common-sense understandings of desert and opportunity via a causal and value-laden account of life events. As Bruner argues, "it is very likely the case that the most natural and the earliest way in which we organize our experience and our knowledge is in terms of the narrative form".[53] It is not too much to ask of contemporary credit systems that at least some of their benefits are granted on expressly narrative rationales. Moreover, if advocates of narrative do not insist on its relevance being imposed by law in appropriate scenarios, they should not be surprised if its waning role in the contemporary academy and culture shrivels to the point of vestigiality.

F. Conclusion

Social scientists and lawyers have proposed many ways of improving the fairness and accountability of computational evaluations of person. They may have several positive effects, addressing several of the concerns described in Part II above. However, there are strong market pressures working to undermine any consistent effort to ensure that corporations address social concerns when they collect, analyse, and use data. It can be extremely expensive and limiting to clean data so thoroughly that all inaccuracies are removed, and discriminatory impacts are addressed. Moreover, even if such improvements are made, alienating aspects of opaque scoring will remain.

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50 Jerome Bruner, *The Culture of Education* (Harvard University Press 1996).
51 Haridimos Tsoukas and Mary Jo Hatch, 'Complex Thinking, Complex Practice: The Case for a Narrative Approach to Organizational Complexity' [2001] 54(8) Human Relations 979.
52 Hartmut Rosa, *Resonance: A Sociology of Our Relationship to the World* (James Wagner tr, Polity 2019).
53 Jerome Bruner, *The Culture of Education* (Harvard University Press 1996) at 121.

Addressing the shortcomings of credit scoring systems will require a concerted effort from all stakeholders involved. It is important to develop ethical guidelines and regulatory frameworks that promote fairness, transparency, and accountability in the development and use of scoring algorithms. Yet even if such efforts are successful, there will be pervasive and persistent misgivings about the tendency of our "ordinal society" to totally subsume so much of credit allocation into algorithmic forms.[54] Therefore, non-algorithmic evaluative systems should play some role as an alternative in the future. They are by no means a panacea, but they can provide concrete help to some marginalized applicants, and may also illuminate shortcomings in dominant algorithmic approaches.

The contribution of this chapter is, we hope, twofold. On a prescriptive level, it offers a rationale for regulators to require those operating powerful social systems to meet halfway at least some of those whom they now exclude or disadvantage via algorithmic means. Algorithmic systems can only be reformed up to a certain point, and certain of their shortcomings are either unreformable or unfathomable given computational complexity and trade secrecy. By contrast, if lenders were required to offer some invitations to rejected applicants to offer a narrative account of their creditworthiness, this would serve as a direct and powerful way to inculcate societal recognition that any evaluative system is but one of many ways of assessing merit.

The second contribution is, on a critical and theoretical level, to explore the types of understanding of algorithmic systems that are possible once one has recognized alternative modes of evaluation. Charles Taylor once observed that behind every critique of power lays a positive (even if unarticulated) normative vision of freedom; behind every critique of lies and obfuscation lays a conception of truth.[55] When a fuller range of evaluative modes are considered, new dimensions of algorithmic evaluations' shortcomings are more sharply delineated. For example, social theory's critique of alienation, once dismissed as idealistic, becomes more urgent and clearer once one understands what authentic self-advocacy would look like in predominantly scored settings. Just as Hartmut Rosa helped revive critical theory by demonstrating its contemporary power when reconsidered in light of his account of resonance, we hope to have advanced the critical

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54 Marion Fourcade and Kieran Healy, *The Ordinal Society* (Harvard University Press 2024).
55 Charles Taylor, C. 'Foucault on Freedom and Truth' [1985] 12(2) Political Theory 152.

sociology of algorithmic accountability by illuminating the strengths and plausibility of a non-algorithmic approach in an evaluative context.[56]

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56 Hartmut Rosa, Resonance: A Sociology of Our Relationship to the World (James Wagner tr, Polity 2019).

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