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## e-Nudging Justice: The Role of Digital Choice Architecture in Online Courts

Ayelet Sela

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# e-Nudging Justice: The Role of Digital Choice Architecture in Online Courts

Ayelet Sela\*

<b>INTRODUCTION</b> .....	127
<b>I. ONLINE COURTS AND THE PROMISE OF ACCESS TO JUSTICE</b> .....	131
<i>a. ODR and access to justice</i> .....	131
<i>b. Examples of online courts</i> .....	134
<i>c. Online courts as digital choice environments</i> .....	136
<b>II. CHOICE ARCHITECTURE AND TECHNOLOGY'S IMPACT</b> .....	138
<i>a. Decision-making and choice architecture</i> .....	139
<i>b. Digital nudging</i> .....	141
<i>c. The impact of technology in ODR</i> .....	142
<b>III. DIGITAL CHOICE ARCHITECTURE AND ONLINE COURTS</b> .....	144
<i>a. Attention scarcity and selective attention</i> .....	144
<i>b. Radio buttons, check boxes, drop down menus, sliders, and text boxes</i> .....	145
<i>c. Choice overload</i> .....	146
<i>d. Display induced nudges: intuition or deliberation</i> .....	148
<i>e. Colorfulness and visual complexity nudge usability and trustworthines</i> ....	152
<i>f. Personalization</i> .....	155
<i>g. Summary and call for action</i> .....	156
<b>IV. EVALUATING CHOICE ARCHITECTURE IN ONLINE COURTS</b> .....	157
<i>a. Choice architecture as a design consideration</i> .....	157
<i>b. SRLs' choices, inputs and procedural justice experiences</i> .....	158
<i>c. Evaluation Methodologies</i> .....	159
<b>V. TOWARDS ETHICAL CHOICE ARCHITECTURE IN ONLINE COURTS</b> .....	162

## INTRODUCTION

Justice systems around the world are launching online courts and tribunals as a means to improve their efficiency, increase access to justice, and ameliorate the quality of proceedings.<sup>1</sup> These online courts and tribunals are publicly administered judicial online dispute resolution (ODR) systems that enable litigants, lawyers, judges and court personnel to complete all litigation related activities, from filing through final disposition, on a dedicated digital platform. Online courts are envisioned as a promising response to many challenges that civil justice systems face, including those stemming from voluminous case filings, procedural complexity, limited accessibility, high costs of litigation, and the ubiquity of settlements and

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\* Assistant Professor (Lecturer), Bar Ilan University Faculty of Law. I thank Hili Eilam, Adi Lubotzki, Or Cohen and Uriel Itzhakov for their excellent research assistance with this project.

1. For a review of sample systems, see JOINT TECH. COMM., CASE STUDIES IN ODR FOR COURTS: A VIEW FROM THE FRONTLINES (2017), <http://www.ncsc.org/~media/Files/PDF/About%20Us/Committees/JTC/JTC%20Resource%20Bulletins/2017-12-18%20ODR%20for%20courts%20v2%20final.ashx> [hereinafter CASE STUDIES IN ODR FOR COURTS].

non-trial adjudication.<sup>2</sup> The guiding premise of judicial ODR systems is that information technology (IT) and innovative procedural design can improve the accessibility, efficiency and effectiveness of courts.<sup>3</sup> Specifically, most online courts are designed to improve access to justice for self-represented litigants (SRLs), who access courts unassisted by lawyers.<sup>4</sup> As such, they respond to calls to redesign civil courts for the typical litigant and process,<sup>5</sup> and specifically, for the skills and needs of SRLs.<sup>6</sup>

Accordingly, online courts are designed to be used by “one-shooter” litigants who have limited legal knowledge, scant resources and no familiarity with courts.<sup>7</sup> To help SRLs navigate and complete the proceedings without the advice or guidance of a lawyer, online courts rely on streamlined and simplified procedures that are delivered through the court’s digital interface. They harness IT tools, user interface (UI) design, and user experience (UX)<sup>8</sup> techniques to offer SRLs a fairly intuitive system that handholds them throughout the process, empowering them to make procedural and substantive decisions, and take legal action.<sup>9</sup> This last attribute of online courts is the focus of this article.

I present an analysis of online courts as digital choice environments. I explore how online court interfaces create choice architectures that shape SRLs’ decisions and actions. Whether purposefully or inadvertently, the design of digital environments often steers their users’ behavior, prompting them to make certain choices

2. See ETHAN KATSH & ORNA RABINOVICH-EINY, DIGITAL JUSTICE: TECHNOLOGY AND THE INTERNET OF DISPUTES 178 (2017) (“Courts and other public entities will inevitably adopt more ODR. Frustration with adversarial proceedings continues to grow, heavy caseloads continue to present a problem, and costs associated with lawyers and litigation continue to be very high—too high for a significant number of individuals.”).

3. See, e.g., ONLINE DISP. RESOL. ADVISORY GRP., ONLINE DISPUTE RESOLUTION FOR LOW VALUE CIVIL CLAIMS, CIV. JUST. COUNCIL 20 (Feb. 2015), <https://www.judiciary.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf> [hereinafter ODR ADVISORY GRP.]; see also CASE STUDIES IN ODR FOR COURTS, *supra* note 1, at 18; Maurits Barendrecht et al., *ODR and the Courts: The Promise of 100% Access to Justice?* 97 (2016), <https://www.hiil.org/wp-content/uploads/2018/09/Online-Dispute-Resolution-Trend-Report.pdf>.

4. ODR ADVISORY GRP., *supra* note 3, at 3; CASE STUDIES IN ODR FOR COURTS, *supra* note 1, at 1; Barendrecht et al., *supra* note 3, at 3.

5. See, e.g., Brooke D. Coleman, *One Percent Procedure*, 91 WASH. L. REV. 1005, 1012 (2016); Barry Edwards, *Renovating the Multi-Door Courthouse: Designing Trial Court Dispute Resolution Systems to Improve Results and Control Costs*, 18 HARV. NEGOT. L. REV. 281, 345 (2013).

6. See Jessica K. Steinberg, *Demand Side Reform in the Poor People’s Court*, 47 CONN. L. REV. 741 (2015); BENJAMIN H. BARTON & STEPHANOS BIBAS, REBOOTING JUSTICE: MORE TECHNOLOGY, FEWER LAWYERS, AND THE FUTURE OF LAW (2017) (advocating for the simplification of court proceedings so that legal representation is less necessary in many types of proceedings, especially low-level disputes, and arguing that technology can play a key role in achieving this goal). Alternative terminologies to SRLs include “pro se litigants” and “litigants in person” or LiPs.

7. In the context of litigation, the term “one-shooters” describes litigants who have limited (or no) familiarity with the court system and the law, a relatively high risk of loss, inferior resources, and no relevant expertise or “advance intelligence.” Marc Galanter, *Why the “Haves” Come Out Ahead: Speculations on the Limits of Legal Change*, 9 L. & SOC’Y REV. 95, 97-103 (1974).

8. The term UX refers to “person’s perceptions and responses resulting from the use and/or anticipated use of a product, system or service” (International Organization for Standardization, *Ergonomics of Human-System Interaction Part 210: Human-Centred Design for Interactive Systems*, INT’L ORG. FOR STANDARDIZATION, §2.15 of ISO 9241-210:2010 (stating user experience refers to a “person’s perceptions and responses resulting from the use and/or anticipated use of a product, system or service”).

9. Critics point out that in order to improve access to justice for people from marginalized groups who confront educational and material impediments (such as illiteracy) to accessing legal recourse, technological solutions should be integrated with human assistance. See, e.g., Tanina Rostain, *Techno-Optimism & Access to the Legal System*, 148 DAEDALUS 93, 96 (2019).

and influencing their inputs and actions. This steering is typically non-transparent and it may be manipulative. Thus, the design of online courts as digital choice environments warrants careful consideration, to ascertain that it is not at odds with core values of the judicial system, such as impartiality and due process, and that it does not infringe SRLs' autonomy and self-determination. Given that litigants have varying interests and preferences, online courts should avoid steering litigants toward particular choices. Instead, I argue that the goal of online court designers should be to create choice architectures that encourage SRLs' engagement in informed and deliberate decision-making, by helping them identify and consider their interests and options, and assisting them in advancing their chosen course of action.

To that end, I describe features of digital choice architecture that were found to have an effect in other contexts. Subsequently, I examine their operation in the context of current online court implementations, and I draw preliminary recommendations for appropriate digital choice architecture in this setting. Finally, I argue that online court designers should be held to heightened ethical and professional standards especially when designing digital choice environments for SRLs. In this vein, I propose a framework for evaluating and guiding the design of online courts, which would help ensure that they do not undermine their core values.

The concept of choice architecture is premised on the idea that a choice can be presented in various ways and the specific way that is used influences the decision-maker's choice.<sup>10</sup> Thaler & Sunstein popularized the idea that choice architects (designers of choice environments) can steer people to choose a particular option by shaping the context in which the decision is made, making choice architecture a useful instrument of policy design and regulation.<sup>11</sup> Choice architects build on research in cognitive psychology and behavioral economics concerning systematic human decision-making behaviors (including biases, heuristics and reasoning) to devise strategies for steering (nudging) people to make certain choices. At the same time, since even minor variations in context can significantly impact decision-making, choice environments are never neutral and they are bound to shape people's choices even if they were not deliberately designed to achieve a specific effect.<sup>12</sup> Examples of choice architecture features include changing the number or order of options that are presented, the framing of options (for example, in terms of gain or loss), and the selection of a default option.<sup>13</sup>

Recently, researchers began exploring the unique attributes of digital interfaces as choice environments. Combining research in psychology, human-computer interaction and information systems, they look at how UX/UI elements of digital interfaces influence user choices and input.<sup>14</sup> They also consider more broadly how

10. RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* 85 (2009).

11. *Id.* at 11.

12. Evan Selinger & Kyle Whyte, *Is There a Right Way to Nudge? The Practice and Ethics of Choice Architecture*, 5 *SOC. COMPASS* 923 (2011).

13. THALER & SUNSTEIN, *supra* note 10, at 6.

14. *See, e.g.*, Anthony Jameson et al., *Choice Architecture for Human-Computer Interaction*, 7 *FOUND. & TRENDS HUMAN-COMPUTER INTERACTION* 1 (2014); SHLOMO BENARTZI & JONAH LEHRER, *THE SMARTER SCREEN: SURPRISING WAYS TO INFLUENCE AND IMPROVE ONLINE BEHAVIOR* (2015); Christoph Schneider, Markus Weinmann & Jan vom Brocke, *Digital Nudging: Guiding Online User Choices Through Interface Design*, 61 *COMM. OF THE ACM* 67 (2018). Notably, the idea that digital interfaces can be used to persuade their users to act in certain ways by changing people's attitudes and behavior long predates the conceptualization of digital choice architecture. *See, e.g.*, B.J. FOGG, *PERSUASIVE TECHNOLOGY: USING COMPUTERS TO CHANGE WHAT WE THINK AND DO* (2003); B. J.

people behave in online environments, often finding differences compared to their behavior in offline settings.<sup>15</sup> For example, user choices can be influenced by changing the design of radio buttons and fonts, or by adjusting the colorfulness of the interface and the organization of content on the screen.<sup>16</sup> An important attribute of digital choice environments is that they operate at the point of decision-making and are thus well-positioned to influence users.<sup>17</sup>

Digital choice architecture is a particularly relevant analytical framework for online courts (and for that matter, any ODR system), as interfaces that organize the context in which SRLs make litigation-related decisions. Such decisions are of the type that Thaler & Sunstein consider most prone to nudging: “decisions that are difficult and rare, for which they [choosers] do not get prompt feedback, and when they have trouble translating aspects of the situation into terms that can be easily understood.”<sup>18</sup> Given the institutional importance of courts, the widely documented effects of choice architecture, the centrality of legal decision-making by lay SRLs to the operation of online courts, and the heightened sensitivity of non-expert decision-makers to nudges, it is essential that we improve our understanding of online courts as digital choice environments.

This article contributes to closing this knowledge gap. I present an initial framework for considering and evaluating digital choice architecture in online courts designed for SRLs, drawing on literature in dispute resolution, behavioral psychology, computer-mediated communication, information systems, and procedural justice. I demonstrate how the self-guided procedures used in online courts create powerful digital choice architectures that are bound to influence SRLs’ legal decisions and actions. I argue that designers of online courts must take these effects into account, and I propose an initial set of recommendations to reduce bias and encourage informed and deliberate decision-making. The discussion lays out the foundation for future work that would measure the impact of digital choice architecture in courts. This body of work should be incorporated in the design and evaluation of online courts, as well as other ODR systems and online legal services.

The implications of this research are not theoretical; in fact, they are timely and practical. Online courts are now gaining momentum and serving growing numbers of litigants. A prominent development is the launch of the “Online Solutions Court” (OSC) in England and Wales, as part of an overarching £1.2 billion reform of courts and tribunals. The reform implements the recommendations of Lord Justice Briggs’ *Civil Courts Structure Review*,<sup>19</sup> to use IT to improve the efficiency of these judicial

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Fogg, Gregory Cuellar & David Danielson, *Motivating, Influencing, and Persuading Users*, in THE HUMAN-COMPUTER INTERACTION HANDBOOK: FUNDAMENTALS, EVOLVING TECHNOLOGIES, AND EMERGING APPLICATIONS 133-46 (Andrew Sears & Julie A. Jacko eds., 2007);

15. BENARTZI & LEHRER, *supra* note 14.

16. See the discussion in Section II.b.

17. See Schneider, Weinmann & vom Brocke, *supra* note 14.

18. THALER & SUNSTEIN, *supra* note 10, at 72.

19. Lord Justice Briggs, *Civil Courts Structure Review: Final Report*, JUDICIARY OF ENG. & WALES (July 2016), <https://www.judiciary.gov.uk/wp-content/uploads/2016/07/civil-courts-structure-review-final-report-jul-16-final-1.pdf> [hereinafter Briggs’ Final Report]. The recommendations regarding the online court were described already in Lord Briggs’ interim report. See Lord Justice Briggs, *Civil Courts Structure Review: Interim Report*, JUDICIARY OF ENG. & WALES (Dec. 2015), <https://www.judiciary.gov.uk/wp-content/uploads/2016/01/ccsr-interim-report-dec-15-final1.pdf> [hereinafter Briggs’ Interim Report]. The recommendations of the two reports were adopted in Courts and Tribunals Judiciary, *Civil Courts Structure Review: Joint Statement from the Lord Chief Justice and the Master of the Rolls*, CTS. & TRIBUNALS JUDICIARY (Jan. 6, 2017), <https://www.judiciary.uk/announcements/civil-courts->

bodies and to increase access to justice, especially for SRLs. Accordingly, since 2018 the English Courts and Tribunals Service (HMCTS) has been gradually rolling out a host of judicial ODR procedures, the hallmark which is the OSC. It is designed with the explicit goal of making the process in monetary claims of up to £25,000<sup>20</sup> more “navigable” for SRLs.<sup>21</sup> The expectation is that “by 2022 most civil disputes in England and Wales will be resolved through an online court.”<sup>22</sup>

The Article proceeds as follows. In Section I, I review the trends that motivated and shaped the launch of online courts, and provide examples for current judicial ODR systems. In Section II, I briefly introduce the discourse on decision-making, choice environments, and nudging, and then focus on digital choice environments and their impact on user choices. In Section III, I build on research in other digital contexts to evaluate how certain UX/UI elements are expected to shape SRLs’ choices in online courts, using examples from current platforms. In Section IV, I propose behavioral and attitudinal measures and methodologies for evaluating online courts as digital choice environments. Section V concludes with some remarks on ethical digital choice architecture in online courts.

## I. ONLINE COURTS AND THE PROMISE OF ACCESS TO JUSTICE

### *a. ODR and access to justice*

The recent launch of multiple online courts, tribunals and other public judicial ODR systems builds on two decades of experience with ODR in other settings. The term ODR describes a range of online procedures and technological tools that disputants and neutrals utilize to resolve disputes.<sup>23</sup> At first, ODR systems were instituted primarily for disputes in e-commerce, e-services and virtual communities,<sup>24</sup> since for a host of practical, economic and legal reasons, it was not feasible to resolve them in person (through adjudication or ADR).<sup>25</sup> Subsequently, public and private service providers began integrating ODR systems to resolve disputes that

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structure-review-joint-statement-from-the-lord-chief-justice-and-the-master-of-the-rolls. For a detailed description of OSC, *see* Section I.b.

20. At its launch, the OSC is capped at 10,000 GBP. Briggs’ Final Report, *supra* note 19, at 118-20.

21. *Id.* at 45.

22. Joshua Rozenberg, *The Online Court: Will IT Work?*, LEGAL EDUC. FOUND., <https://long-reads.thelegaleducationfoundation.org/> (last updated Feb. 2019); *see also* Briggs’ Final Report, *supra* note 19, at 46, 115-16. Rozenberg reports that HMCTS remains committed to this timelines, despite a report by the country’s National Audit Office which suggests that “the portfolio will prove to be undeliverable in the time available.” Comptroller & Auditor General, *Early Progress in Transforming Courts and Tribunals*, HMCTS & TRIBUNALS SERV. 9 (May 9, 2018), <https://www.nao.org.uk/wp-content/uploads/2018/05/Early-progress-in-transforming-courts-and-tribunals.pdf>.

23. ETHAN KATSH & JANET RIFKIN, *ONLINE DISPUTE RESOLUTION: RESOLVING CONFLICTS IN CYBERSPACE* (2001).

24. A paradigmatic example is eBay’s “Resolution Center”: As a large online marketplace, eBay faces an annual caseload of over sixty million disputes, typically of a relatively low value and between buyers and sellers that are geographically distant from one another. It was virtually impossible to solve these disputes through traditional court or ADR processes. *See* Colin Rule, *Making Peace on eBay: Resolving Disputes in the World’s Largest Marketplace*, *ACRESOLUTION* 8 (2008).

25. Ayelet Sela, *The Effect of Online Technologies on Dispute Resolution System Design: Antecedents, Current Trends and Future Directions*, 21 *LEWIS & CLARK L. REV.* 633, 635-37 (2017); Ethan Katsh, *ODR: A Look at History— A Few Thoughts About the Present and Some Speculation About the Future*, in *ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE* 9 (Mohamed S. Abdel Wahab, Ethan Katsh & Daniel Rainey eds., 2012).

arise both online and offline, in a wide array of legal domains.<sup>26</sup> Finally, in recent years, multiple courts, tribunals and other judicial bodies launched online proceedings.<sup>27</sup>

The incorporation of ODR processes into courts is subject to debate. ODR scholars have long argued that technology can make dispute resolution processes less costly and more accessible and efficient, and that it can introduce greater accountability, fairness and equality to procedures.<sup>28</sup> In the specific context of courts, scholars recognized the potential of online communication, personalization techniques and information management technologies to expand access to remedies, improve the quality of processes, and ameliorate the experience and performance of stakeholders.<sup>29</sup>

At the same time, there are concerns as to whether dispute resolution processes can be adequately conducted online without infringing the rights of the parties and important procedural principles. Specifically, it is suggested that incorporating ODR in courts will deter some litigants from initiating claims and will negatively affect the ability of litigants to effectively participate in the proceedings.<sup>30</sup> A key worry is that the limitations that the online environment imposes on human communication, privacy, confidentiality and neutrality can distort the process or its outcomes.<sup>31</sup> Some argue that online proceedings will obstruct the fact-finding process and prevent an accurate assessment of credibility and demeanor, thereby reducing the ability of judges to reach a correct judgment.<sup>32</sup> Furthermore, it is suggested that online courts undermine the important public functions of public hearings,<sup>33</sup> and may alter the types of cases that people pursue through courts. Finally, like all digital platforms, online courts involve inherent risks to information security, privacy protection and identity authentication.

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26. For a review see Sela, *supra* note 25, at 640-41.

27. See CASE STUDIES IN ODR FOR COURTS, *supra* note 1, at 1 and the review in Section I.b.

28. See, e.g., David Allen Larson, *Technology Mediated Dispute Resolution (TDMR): A New Paradigm for ADR*, 21 OHIO ST. J. ON DISP. RESOL. 629 (2006); Jelle van Veenen, *From :- (to :-) Using Online Communication to Improve Dispute Resolution* (TISCO Working Paper No. 2/2010), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1618719](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1618719); Ethan Katsh & Orna Rabinovich-Einy, *Technology and the Future of Dispute Systems Design*, 17 HARV. NEGOT. L. REV. 151 (2012).

29. Ayelet Sela, *Streamlining Justice: How Online Courts Can Resolve the Challenges of Pro Se Litigation*, 26 CORNELL J.L. & PUB. POL'Y 331 (2016); Orna Rabinovich-Einy & Ethan Katsh, *The New New Courts*, 67 AM. U. L. REV. 165 (2017); J.J. Prescott, *Improving Access to Justice in State Courts with Platform Technology*, 70 VAND. L. REV. 1993 (2017); Amy J. Schmitz, *Expanding Access to Remedies Through E-Court Initiatives*, 67 BUFF. L. REV. 89 (2019).

30. See Natlie Byrom, *Developing the Detail: Evaluating the Impact of Court Reform in England and Wales on Access to Justice*, LEGAL EDUC. FOUND. 18 (2019), <https://research.thelegaleducationfoundation.org/wp-content/uploads/2019/02/Developing-the-Detail-Evaluating-the-Impact-of-Court-Reform-in-England-and-Wales-on-Access-to-Justice-FINAL.pdf>.

31. See generally Rabeea Assy, *Briggs's Online Court and the Need for a Paradigm Shift*, 36 CIV. JUST. Q. 93 (2017); Joel B. Eisen, *Are We Ready for Mediation in Cyberspace?*, 1998 BYU L. REV. 1305, 1308-09 (1998); Joseph B. Stulberg, *Mediation, Democracy, and Cyberspace*, 15 OHIO ST. J. ON DISP. RESOL. 619, 641 (2000).

32. See Assy, *supra* note 31; Byrom, *supra* note 30, at 23-25 (reviewing the literature on the negative effects of on video-conference hearings).

33. See Judith Resnik, *A2J/A2K: Access to Justice, Access to Knowledge, and Economic Inequalities in Open Courts and Arbitrations*, 96 N.C. L. REV. 102 (2018).

While the debate continues, several legal systems embraced the vision of online courts as an effective policy response to pressing needs of both courts and litigants.<sup>34</sup> The guiding premise is that IT can introduce efficiency to overburdened courts that process large volumes of disputes, as well as mitigate financial, physical and knowledge barriers to litigants' access to justice, and specifically, improve SRLs' engagement with courts.<sup>35</sup> This premise motivated online court designers to adopt the user-centric approach that shaped private consumer ODR platforms, and it is embodied in their reliance on self-guided procedures.

Consumer ODR platforms are designed to handhold their inexperienced lay consumer-disputants throughout the dispute resolution process. They use tailored UX/UI features and automation to help their users complete the process independently without prior training, knowledge or assistance. A paradigmatic example is eBay's Resolution Center, which guides disputing buyers and sellers through a structured and automated ODR process that resolves about 90 percent of the disputes without human involvement on eBay's part.<sup>36</sup> Such schemes now inspire online court designers,<sup>37</sup> to streamline the process and encourage independent settlement. Specifically, online courts provide SRLs with information, guidance, and on-site support to help them avoid procedural and substantive errors and to empower them to participate in the proceedings without a lawyer.<sup>38</sup>

Online courts also pave the way for offering litigants the opportunity to optimize procedural preferences. Most online court models follow a tiered process design that includes technologically supported negotiation with the other party, the option to involve a human third-party (mediator, facilitator or judge), and the option to attend a video-hearing or an in-person hearing.<sup>39</sup> By facilitating information exchange, communication and generation of settlement options, online courts are positioned to help parties settle their dispute. This procedural approach is consistent with the settlement culture that characterizes civil litigation in many common law jurisdictions.<sup>40</sup>

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34. ODR ADVISORY GRP., *supra* note 3; CASE STUDIES IN ODR FOR COURTS, *supra* note 1; Barendrecht et al., *supra* note 3; Briggs' Final Report, *supra* note 19; Briggs' Interim Report, *supra* note 19.

35. See Shannon Salter, *Online Dispute Resolution and Justice System Integration: British Columbia's Civil Resolution Tribunal*, 34 WINDSOR Y.B. ACCESS JUST. 112 (2017); Maximilian A. Bulinski & J.J. Prescott, *Online Case Resolution Systems: Enhancing Access, Fairness, Accuracy, and Efficiency*, 21 MICH. J. RACE & L. 205, 221 (2016); Briggs' Final Report, *supra* note 19; Briggs' Interim Report, *supra* note 19; Sela, *supra* note 29.

36. AMY J. SCHMITZ & COLIN RULE, *THE NEW HANDSHAKE: ONLINE DISPUTE RESOLUTION AND THE FUTURE OF CONSUMER PROTECTION* 53 (2017) ("eBay's ODR was successful because the automated resolution rate reached 90%. That meant that 90% of the 60 million disputes were resolved in software only..."); Rule, *supra* note 24, at 8-10.

37. See, e.g., ODR ADVISORY GRP., *supra* note 3.

38. See Sela, *supra* note 29; Briggs' Final Report, *supra* note 19; Briggs' Interim Report, *supra* note 19.

39. See Section I.b.

40. Ayelet Sela & Sigal Ressler-Zakai, *Court 2.0: Institutionalizing Online Court Proceedings in Israel*, BAR ILAN LEGAL STUD. (forthcoming) [Hebrew] (Analyzing online courts in the context of broader trends in the legal system, including the settlement culture); Ayelet Sela, Nourit Zimmerman & Michal Alberstein, *Judges as Gatekeepers and the Dismaying Shadow of the Law: Courtroom Observations of Judicial Settlement Practices* 24 HARV. NEGOT. L. REV. 83, 83 (2018) ("Adjudication by trial and judgment is a rare sight in civil courts. A strong settlement culture characterizes civil litigation: settlements are 'the modal civil case outcome,' the court's promotion of settlements is institutionalized by law, and settlements have become a central part of the 'trial judge's job description.'" See further *id* at 89-92.)



In the following sections, I explain how online courts create elaborate digital choice environments, taking SRLs through self-guided procedures that require them to select among available procedural options, solicit their input, and ask them to take decisions about their legal dispute, including, potentially, defining the terms of its disposition in a settlement.

### *b. Examples of online courts*

The past decade has seen significant growth in the area of judicial ODR, as manifested in the institution of multiple online courts, tribunals and other judicial proceedings the world over. In order to demonstrate the nature of online courts as digital choice environments, this section briefly describes a few notable examples.<sup>41</sup> At the outset, it is worthwhile noting that many online courts use a tiered model that combines several types of ODR processes and technologies. The plethora of ODR technologies and process designs can be roughly divided into three categories: *Transposed* ODR processes merely move the interaction from a physical location (such as a courtroom) to an online space (such as a text-messaging or video interface).<sup>42</sup> *Restructured* ODR processes facilitate the dispute resolution process by simplifying, structuring and streamlining the collection, exchange and management of information (for example, through structured web-forms or questionnaires).<sup>43</sup> Finally, *automated* ODR processes rely on algorithmic processes that enhance the performance of disputants and third-parties or automate the work of third-parties.<sup>44</sup>

In England and Wales, the *Traffic Penalty Tribunal*<sup>45</sup> (TPT)<sup>46</sup> provides appellants with an automated diagnostic questionnaire to help identify whether they meet the procedural requirements for filing an appeal. Subsequently, appellants and responding authorities use an online dashboard to file pleadings, upload and comment on evidence, and follow the progression of the case through final decision. In 2017, 37,432 appeals were filed to TPT.<sup>47</sup> According to its 2016 report, most TPT appeals involve only a written e-decision (seventy-six percent); in sixteen percent there are telephone hearings, and in eight percent an in-person hearing takes place.<sup>48</sup>

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For review of additional judicial ODR systems, see Rabinovich-Einy & Katsh, *supra* note 29; Barendrecht et al., *supra* note 3; CASE STUDIES IN ODR FOR COURTS, *supra* note 1; ODR ADVISORY GRP., *supra* note 3.

41. For review of additional judicial ODR systems, see Rabinovich-Einy & Katsh, *supra* note 29; Barendrecht et al., *supra* note 3; CASE STUDIES IN ODR FOR COURTS, *supra* note 1; ODR ADVISORY GRP., *supra* note 3.

42. Sela, *supra* note 25, at 650-53.

43. *Id.* at 653-59.

44. *Id.* at 659-66. I refer there to a broader category of *novel* ODR processes which includes additional dispute resolution models which are currently irrelevant in courts, such as crowdsourced ODR.

45. *Impartial, Independent Adjudicators*, TRAFFIC PENALTY TRIBUNAL ENG. & WALES, <https://www.trafficpenaltytribunal.gov.uk/> (last visited Apr. 22, 2019).

46. *See I Want to Appeal*, TRAFFIC PENALTY TRIBUNAL ENG. & WALES, <http://www.trafficpenaltytribunal.gov.uk/want-to-appeal> (last visited Apr. 22, 2019) (for a list of all penalties which can be appealed in TPT).

47. *Annual Statistics Report 2016/17*, TRAFFIC PENALTY TRIBUNAL ENG. & WALES 18, [https://www.trafficpenaltytribunal.gov.uk/docs/TPT\\_Annual\\_Statistics\\_Report\\_16\\_17.pdf](https://www.trafficpenaltytribunal.gov.uk/docs/TPT_Annual_Statistics_Report_16_17.pdf) (last visited Apr. 22, 2019).

48. *Annual Statistics Report 2015/16*, TRAFFIC PENALTY TRIBUNAL ENG. & WALES 4, [https://www.trafficpenaltytribunal.gov.uk/docs/TPT\\_Stats-Report\\_15-16\\_V12.pdf](https://www.trafficpenaltytribunal.gov.uk/docs/TPT_Stats-Report_15-16_V12.pdf) (last visited Apr. 22, 2019).

In Canada, the *Civil Resolution Tribunal* (CRT)<sup>49</sup> uses a tiered process that was designed to help SRLs handle small-claims of up to 5,000 Canadian dollars and strata property disputes.<sup>50</sup> As of April 2019, CRT will have jurisdiction also over certain types of motor vehicle accident claims and disputes involving non-profit societies and co-operative associations.<sup>51</sup> The CRT process begins with a “Solution Explorer,”<sup>52</sup> an automated dynamic online wizard that helps potential litigants diagnose the problems they face and presents them with relevant legal information and courses of action. Subsequently, litigants can file a case to CRT and engage in online asynchronous free-text party-to-party settlement negotiations on the platform.<sup>53</sup> If needed, litigants can further go through a facilitation process by a staff mediator.<sup>54</sup> If no agreement is reached, litigants proceed to adjudication by a tribunal member.<sup>55</sup> On CRT, facilitation and adjudication can involve video or audio communication, and in-person hearings can be held at the discretion of the judge. According to CRT’s December 2018 statistical report, since its launch the “Solution Explorer” has been used over 50,000 times, and it has processed nearly 9,000 disputes.<sup>56</sup>

In the United States, courts in several states, including Michigan, Ohio, Arkansas, and Utah use the *Matterhorn* platform to launch voluntary online judicial proceedings for outstanding warrants and traffic violations, small claims, and family disputes.<sup>57</sup> Accessible from both computers and mobile devices, “Matterhorn presents the litigant in question with choices,”<sup>58</sup> which include the ability to “engage with prosecutors and judges online with the goal of arriving at a mutually satisfactory outcome”<sup>59</sup> (such as a relief or a settlement). The platform provides the litigant with relevant information, instructions, and documents, and collects the litigant’s submissions and responses to pre-specified questions that are required to support their case.<sup>60</sup> Settlement offers or reliefs are communicated through the platform. In the case of civil infractions, the recommendation of a city attorney or prosecutor is reviewed by a judge prior to its transfer to the litigant. In cases that regard outstanding warrants, litigants may file online a request to devise a payment plan or to hold a hearing.<sup>61</sup>

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49. CIV. RESOL. TRIBUNAL, <https://civilresolutionbc.ca/> (last visited Apr. 22, 2019) (The tribunal was institutionalized by Civil Resolution Tribunal Act, S.B.C. 2012, c 25 (Can.)).

50. *CRT Statistics Snapshot: October 2018*, CIV. RESOL. TRIBUNAL (Nov. 19, 2018), <https://civilresolutionbc.ca/crt-statistics-snapshot-september-2018-2/>. For a description of CRT, see the discussion in Section X.

51. *Civil Resolution Tribunal Amendment Act*, S.B.C. 2018, c17 (Can.). For a detailed review, see *Province of BC Expands Civil Resolution Tribunal’s Jurisdiction*, CIV. RESOL. TRIBUNAL, <https://civilresolutionbc.ca/province-bc-expands-civil-resolution-tribunals-jurisdiction/> (last visited Apr. 22, 2019).

52. Each case type has its own “solution explorer”, see, e.g., *Small Claims*, CIV. RESOL. TRIBUNAL, <https://civilresolutionbc.ca/how-the-crt-works/getting-started/small-claims-solution-explorer/> (last visited Apr. 22, 2019) [hereinafter CRT Solution Explorer].

53. *The CRT Process*, CIV. RESOL. TRIBUNAL, <https://civilresolutionbc.ca/how-the-crt-works/tribunal-process/> (last visited Apr. 22, 2019).

54. *Id.*

55. *Id.*

56. *CRT Statistics Snapshot – December 2018*, CIV. RESOL. TRIBUNAL, <https://civilresolutionbc.ca/crt-statistics-snapshot-december-2018/> (last visited Apr. 22, 2019).

57. See review in Rabinovich-Einy & Katsh, *supra* note 29, at 197.

58. Prescott, *supra* note 29, at 2022.

59. *Id.*

60. *Id.*

61. *Id.* at 2022-23; Rabinovich-Einy & Katsh, *supra* note 29, at 197-98.

The last example is the OSC that is gradually rolling out in England and Wales. Its process is designed to begin with an automated triage phase that will assist SRLs in solving their problem at an early stage. Based on SRLs' responses to a series of questions, the system is expected to provide information about whether they have a valid claim, help them identify and articulate their claim (or defense), and present alternative courses of action.<sup>62</sup> This early triage phase is scheduled to be implemented last, at which point the information provided could then be used to submit a claim form. Currently, HMCTS has launched the case filing and processing system, which takes SRLs through a web-wizard that helps them formulate and file their claims and defenses, upload evidence to the system, exchange settlement offers and negotiate a solution.<sup>63</sup> Subsequently, case officers, a new position created for the OSC, can provide case management and conciliation through online, telephone or in-person communication, mediation or early neutral evaluation.<sup>64</sup> Finally, if the case is not resolved, a judge determines its merit, either based on the documents and evidence that were uploaded or following a telephone, video-conference or in-person hearing.<sup>65</sup> While HMCTS is in the process of piloting video-conference hearings,<sup>66</sup> its chief-executive recently noted that there is now increased judicial support for an "opt out" rather than "opt in" model for mediation in smaller claims such that these cases are more likely to settle and they "expect to see fewer cases suitable for video-hearings... [or that] come to a hearing of any kind."<sup>67</sup> Since its launch in March 2018 through February 2019, more than 51,000 claims have been made using OSC's civil money claims online service for amounts under £10,000.<sup>68</sup>

### *c. Online courts as digital choice environments*

Online courts "mark a radical departure from the traditional courts."<sup>69</sup> First, the process moves from a physical court to a digital court setting which supports all litigation-related activities. Second, online courts are modeled from inception to encourage independent problem-solving, settlement, or other forms of early case disposition. The underlying assumption of their tiered approach is that a full trial (or appeal) process followed by a judicial determination of the merits of the case is an infrequent last resort. The majority of cases are expected to terminate at the decision of litigants, according to terms they formulate themselves. Finally, online courts are designed to serve SRLs and enable them to independently take all necessary procedural and substantive legal actions. To that end, they employ simplified

62. Briggs' Final Report, *supra* note 19, at 58-59.

63. For a video demonstration of this phase of the OSC platform, which is currently running in a public beta version, see HMCTSGovuk, *HMCTS Reform Online Event 15 October 2018: Civil Reform*, YOUTUBE (Oct. 31, 2018), <https://www.youtube.com/watch?v=WmfO093W3s4>.

64. Briggs' Final Report, *supra* note 19, at 59.

65. *Id.* at 38.

66. Meredith Rossner & Martha McCurdy, *Implementing Video Hearings (Party-to-State): A Process Evaluation*, MINISTRY JUST. (Sept. 13, 2018), [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/740275/Implementing\\_Video\\_Hearings\\_web\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740275/Implementing_Video_Hearings_web_.pdf).

67. Susan Acland-Hood, *How Do We Work Out When to Stick, and When to Twist?*, INSIDE HMCTS (Feb. 28, 2019), <https://insidehmcts.blog.gov.uk/2019/02/28/how-do-we-work-out-when-to-stick-and-when-to-twist/>.

68. *Id.* Notably, the reported number refers to claims made rather than lawsuits disposed.

69. Briggs' Interim Report, *supra* note 19, at 78.

procedural rules that are implemented through schemes of self-guided procedures, which are meant to be comprehensible, navigable and action-enabling, without the support of lawyers.

In practice, these self-guided procedures comprise a series of mini-steps in which litigants are required to provide information, make choices and take concrete actions to advance their case to resolution. Litigants' provision of information, choices and actions are conducted through the online court interface, featuring multiple UX/UI elements and IT tools, such as wizards (online questionnaires), web-forms, help-buttons and designed informational text.<sup>70</sup> These features are bound to influence the way litigants, and especially lay SRLs, engage with online courts. Specifically, they shape how SRLs diagnose issues, provide information, understand legal options, make choices, take actions, propose or accept settlement offers, and finalize the outcome of their case. It is in this context that I propose to consider online courts as digital choice environments, and call to critically evaluate their digital choice architecture attributes.

The conceptual framework of digital choice architecture considers how designers of online interfaces shape the context in which people make decisions, thereby steering them to make (or avoid) specific choices and behave in certain ways. In this respect, online courts are not different from digital choice environments that have been studied: they face an inherent risk of introducing bias, manipulating litigants' behavior, and negatively affecting the quality of their engagement with the process. At the same time, online courts hold the promise of leveraging their design to improve the quality of litigant engagement and support deliberation and informed decision-making. Institutionally, misguided UX/UI design can infringe upon core values of the civil justice system, including its neutrality and its commitment to procedural and substantive justice. It follows, that if online courts are to achieve their policy goals, and specifically, improve access to justice while ensuring procedural justice and litigants' self-determination, it is critical to understand how their design affects user decisions and actions.

Thus, the gist of my argument is that the analytical framework and empirical findings on digital choice architecture must inform the design of online courts, while bearing in mind that the goals of choice architecture in online courts are *substantively different* from the common goals of digital choice architecture in commercial contexts. Otherwise, the very same attributes that fuel the promise of online courts to improve access to justice may end up jeopardizing it. Online courts are substantively different from other digital choice environments. While in commercial contexts, digital choice architects typically aspire to nudge users in a particular way (such as to spend more time or money on a website), the goal of online court designers should be different: to help litigants make *informed* and *deliberate* decisions that promote their self-determination and serve their *own* interests. Moreover, while the literature on legal self-help websites emphasizes the importance of usability, user-friendliness and streamlining task-completion,<sup>71</sup> the literature on digital

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70. In addition, online courts often rely on automatic application of legal rules that are embedded in the software code, a feature which I do not discuss here.

71. For a review of this literature, see Margaret Hagan, *The User Experience of the Internet as a Legal Help Service: Defining Standards for the Next Generation of User-Friendly Online Legal Services*, 20 VA. J.L. & TECH. 395 (2016). Hagan points to "several insights about what user-friendly online legal services should do and should not do," which include features such as "segment and stage information with short versions put prominently up front . . . present clear markers of trustworthiness and value that

choice architecture, as reviewed in Section III, suggests that these very same attributes may hinder SRLs' ability to make informed and deliberate decisions.

Since no choice environment is neutral, the goal should be to design online courts that adhere to the core values and functions of courts, and encourage litigants to engage in informed and deliberate decision-making, introducing as little bias as possible while enhancing (or at least preserving) litigants' self-determination. At this point I should clarify that in dispute resolution contexts, the concept of self-determination is not limited to free will and informed consent. Rather, it encompasses broader notions of litigant "control over process and outcome"<sup>72</sup> to which Nancy Welsh refers in terms of "indicia of party empowerment"<sup>73</sup> that include "active and direct participation... identification and selection of... interests... creation of potential settlement options; and the parties' control over the final outcome"<sup>74</sup> (most typically, a settlement agreement).

A first step is to understand the psychological mechanisms of choice and consider their operation in the specific context of online courts. To that end, Section II(a) briefly reviews the literature on human decision-making and strategies for influencing it through choice architecture. Section II(b) focuses the discussion on digital choice architecture, explaining how UX/UI features and inherent attributes of the online sphere can affect decision-making on digital interfaces. Section II(c) sets the stage for analyzing digital choice architecture in ODR, and specifically—courts, by briefly reviewing research on the impact of technology on dispute resolution. Subsequently, Section III builds on research in other domains, to consider how specific digital choice architecture features may play out in the context of online courts.

## II. CHOICE ARCHITECTURE AND TECHNOLOGY'S IMPACT

Online court processes are designed as guided procedures in which SRLs go through a series of micro-level choices and macro-level legal decisions.<sup>75</sup> Analyzing online courts as digital choice environments requires understanding both the psychology of choice and decision-making (how people go about making choices) and strategies for supporting choice in digital environments (how to leverage digital interfaces to help people make choices that best serve them).<sup>76</sup>

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engage a visitor to the site and convert them into a user . . . offer a user-friendly navigation . . . give clear indications about what might be most appropriate for the user and why . . .” *Id.* at 421-22.

72. Lisa B. Bingham, *Self-Determination in Dispute System Design and Employment Arbitration*, 56 U. MIAMI L. REV. 873, 881 (2002).

73. Nancy A. Welsh, *The Thinning Vision of Self-Determination in Court-Connected Mediation: The Inevitable Price of Institutionalization?*, 6 HARV. NEGOT. L. REV. 1, 80 (2001).

74. *Id.*

75. In his book on persuasive technology, Fogg distinguishes between *macro-level* persuasion in systems designed to persuade people to do things (such as use energy for efficiently) and *micro-level persuasion*, which is inherent to any interactive system, when users are being persuaded to perform a particular action. See FOGG, *supra* note 14. Online courts, too, involve both micro-level choices and macro-level legal decisions.

76. See also Jameson et al., *supra* note 14, at 3-4. I discuss the challenging question of what constitutes a choice that best serves litigants in sections IV and V.

## A. DECISION-MAKING AND CHOICE ARCHITECTURE

A widely accepted social psychology theory suggests that individuals use two distinct cognitive systems to assess information while making decisions: an “automatic” system and a “reflective” system.<sup>77</sup> System 1, is fast, automatic, effortless and emotionally charged. People use System 1 when they make decisions they view as intuitive—for example, when they need to decide quickly, when they are overwhelmed with feelings, or when they lack sufficient information, experience or adequate feedback. System 2, on the other hand, is reason-based, and therefore slower, effortful, calculative, and deliberately controlled. Its reflective operation requires more time and cognitive resources.<sup>78</sup> As an evolutionary necessity, everyday decision-making is governed primarily by System 1, which is prone to heuristics and biases<sup>79</sup> and susceptible to the influence of contextual factors in the choice environment.<sup>80</sup> At the same time, reason-based decision-making that is governed by System 2 is also affected by contextual factors that influence the quality of deliberation.<sup>81</sup>

Several decades of research by social psychologists and behavioral economists indicates that even seemingly minor variations in the context in which decisions are made can trigger heuristics, biases and other mechanisms that impact people’s decisions.<sup>82</sup> Noticeably, some of the identified mechanisms partially contradict or overlap each other. The reason is that different types of choices, contexts and decision-makers may evoke different decision-making mechanisms and biases. Thus, it is important to identify whether and how they operate in specific circumstances.

For example, a *framing* effect takes place when a decision is presented in a way that the decision-maker’s conception of the acts, outcomes, and contingencies is associated with a particular choice.<sup>83</sup> To illustrate this effect, consider the effect on people’s decision whether to consume a food product when it is framed as either ninety percent fat free or as comprising ten percent fat. A *decoy* effect occurs when a choice architect increases the attractiveness of an option by presenting it alongside an unattractive option that no one would reasonably choose (the decoy).<sup>84</sup> *Status quo bias* describes the tendency of individuals to remain with the current state of affairs, as the disadvantages of leaving it loom larger than the advantages associated

77. DANIEL KAHNEMAN, THINKING, FAST AND SLOW (2011); Keith E. Stanovich & Richard F. West, *Individual Differences in Reasoning: Implications for the Rationality Debate?*, 23 BEHAV. & BRAIN SCI. 645 (2000).

78. Stanovich & West, *supra* note 77, at 659.

79. *Id.*; see also Daniel Kahneman, *Maps of Bounded Rationality: Psychology for Behavioral Economics*, 93 AM. ECON. REV. 1449 (2003).

80. THE CONSTRUCTION OF PREFERENCE (Sarah Lichtenstein & Paul Slovic eds., 2006) (A collection of studies by multiple authors that demonstrate that decision making is a contingent form of information processing which is sensitive to contextual factors such as task complexity, time pressure, response mode, framing, and reference points.).

81. For examples, see Christine Jolls & Cass R. Sunstein, *Debiasing Through Law*, 35 J. LEGAL STUD. 199 (2006) (discussing disclosure of relevant information or making information more salient, debiasing); IAN AYRES, CARROTS AND STICKS: UNLOCK THE POWER OF INCENTIVES TO GET THINGS DONE (2011) (using pre-commitment strategies through which people agree, in advance, to a particular course of conduct).

82. THALER & SUNSTEIN, *supra* note 10.

83. Daniel Kahneman & Amos Tversky, *The Simulation Heuristic*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 201 (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982).

84. Eric J. Johnson et al., *Beyond Nudges: Tools of a Choice Architecture*, 23 MKTG. LETTERS 487 (2012).

with a change.<sup>85</sup> A common application of the status quo bias is to present decision-makers with a *default* option.

An *anchoring and adjustment* effect operates when decision-makers lack information about options, and therefore become biased toward any given starting values (especially when the values are set in the decision frame).<sup>86</sup> Accordingly, when people are presented with different starting points (anchors) they develop different value estimates.<sup>87</sup> A *priming* effect describes the influence of introducing specific topics, moods, questions, or information to the decision-maker before the decision is made, thereby increasing the likelihood that they will make a particular decision.<sup>88</sup> Another prominent cause of bias stems from *loss aversion*, the tendency of losses and disadvantages to have greater impact on people's preferences than gains and advantages.<sup>89</sup> A related bias is *scarcity effect*, which describes individuals' tendency to perceive scarce objects as more attractive or desirable.<sup>90</sup>

A rich body of research considers the impact of biases and heuristics in dispute resolution,<sup>91</sup> although the idea of leveraging these psychological mechanisms in a dispute system design has not received much attention.<sup>92</sup> In the context of ODR systems, and especially online courts, it becomes critical, and can be analyzed using Thaler & Sunstein's framework of choice architecture.

Thaler & Sunstein relied on a vast body of theoretical and empirical work on decision-making and factors that influence it, to propose the idea of *nudging*. It refers to influencing peoples' decision-making by leveraging biases, heuristics and psychological influences on perception, cognitive processing and reasoning. A *nudge* is defined as "any aspect of the choice architecture that alters individuals' behavior in a predictable way without forbidding any options or significantly changing their economic incentives."<sup>93</sup> Designers of decision environments are considered choice architects because they shape the way choices are presented, thereby influencing, intentionally or unintentionally, the choices that people make.<sup>94</sup> A key point is that choice environments are never neutral because "both nudges and choice

85. Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193, 198 (1991).

86. Daniel Kahneman & Amos Tversky, *Judgment Under Uncertainty: Heuristics and Biases* 185 SCIENCE 1124, 1128 (1974)

87. *Id.*

88. Russell H. Fazio, David M. Sanbonmatsu & Frank L. Kardes, *On the Automatic Activation of Attitudes* 50 J. PERSON. & SOC. PSYCH. 229 (1986)

89. Kahneman, Knetsch & Thaler, *supra* note 85; see EYAL ZAMIR, LAW, PSYCHOLOGY, AND MORALITY: THE ROLE OF LOSS AVERSION (2014) (for a discussion of loss aversion in legal contexts as well as its relationship to other mechanisms such as status quo bias and the endowment effect).

90. Howard L. Fromkin & C. R. Snyder, *The Search for Uniqueness and Valuation of Scarcity*, in SOCIAL EXCHANGE: ADVANCES IN THEORY AND RESEARCH 57 (Kenneth J. Gergen, Martin S. Greenberg & Richard H. Willis eds., 1980).

91. See Andrea Caputo, *A Literature Review of Cognitive Biases in Negotiation Processes*, 24 INT'L J. CONFLICT MGMT. 374 (2013). An early example of this discourse appears in the work of Lee Ross and his collaborators, such as Lee Ross & Constance Stillinger, *Barriers to Conflict Resolution*, 7 NEGOT. J. 389, 392-93 (1991) (discussing the effects of "loss aversion" bias in negotiation) and Lee Ross & Andrew Ward, *Psychological Barriers to Dispute Resolution*, 27 ADVANCES EXPERIMENTAL SOC. PSYCHOL. 255 (1995).

92. Notably, the literature has discussed the potential of using dispute system design to counter biases in dispute resolution processes. See, e.g., Lisa Blomgren Amsler et al., *Dispute System Design and Bias in Dispute Resolution*, 70 SMU L. REV. 913 (2017).

93. THALER & SUNSTEIN, *supra* note 10, at 6.

94. Johnson et al., *supra* note 84.

architecture are inevitable.”<sup>95</sup> Choice architecture is an impactful tool because even minor changes in the choice environment can steer choosers toward choosing particular options. A classic example of a nudge is to organize food options in a cafeteria such that healthy food options are positioned at customers’ eye level, thereby making them more salient and easier to reach compared to unhealthy options, without eliminating the ability to choose unhealthy foods.<sup>96</sup>

Thaler & Sunstein argue that nudges are a tool of libertarian paternalism, because they can be used to help people make better decisions in their own interests,<sup>97</sup> while preserving individual freedom of choice.<sup>98</sup> Still, the use of nudges raises fundamental ethical concerns, in particular with respect to nudges that appear manipulative. I discuss these concerns in the context of online courts in Section IV.

### *b. Digital nudging*

Due to the ubiquity of smart phones, computers, and tablets, nowadays people often make decisions—some of which are important—on digital devices. As a result, UX/UI designers create many of today’s choice environments,<sup>99</sup> in domains as diverse as personal, social, financial, medical, and business decisions. Similar to offline settings, digital choice environments cannot present options in a neutral way, and people’s choices can be nudged.<sup>100</sup> The term *digital nudging* refers to “the use of user-interface design elements to guide people’s behavior in digital choice environments,”<sup>101</sup> by adjusting visual attributes<sup>102</sup> and “deliberately presenting choices or organizing workflows”<sup>103</sup> in order to influence users’ inputs or decisions. Thusly, the UX/UI of digital choice environments introduces new modes of influencing decisions.<sup>104</sup> As in offline settings, the selection of an effective and appropriate digital nudging strategy is determined by the type of choice and the specific heuristics and biases that are at play.<sup>105</sup>

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95. Cass R. Sunstein, *The Ethics of Nudging*, 32 YALE J. ON REG. 413, 415 (2015). See also Daniel M. Hausman & Brynn Welch, *Debate: To Nudge or Not to Nudge*, 18 J. POL. PHIL. 123 (2010) (suggesting that choice architecture is unavoidable and therefore cannot be morally problematic in itself).

96. THALER & SUNSTEIN, *supra* note 10.

97. That is, decisions that promote their welfare, as judged by choosers themselves. *Id.*, at 5.

98. According to Thaler & Sunstein, “[t]o count as a mere nudge, the intervention must be easy and cheap to avoid”. *Id.* at 6. Notably, critics contest the claim that nudges preserve freedom of choice. See, e.g., Selinger & Whyte, *supra* note 12, at 928 (“Would someone who values their freedom to choose be okay with the idea that their behavior is being modified in ways they are not aware of? Though there is a sense in which those being nudged have the same set of choices available to them, perhaps it is not one that is acceptable to those who worry in particular about their degree of freedom in society.”).

99. Johnson et al., *supra* note 84.

100. BENARTZI & LEHRER, *supra* note 14.

101. Markus Weinmann, Christoph Schneider & Jan vom Brocke, *Digital Nudging*, 58 BUS. & INFO. SYS. ENG’G 433, 433 (2016).

102. BENARTZI & LEHRER, *supra* note 14.

103. Schneider, Weinmann & vom Brocke, *supra* note 14, at 68.

104. As digital environments continue to evolve and change, new modes of behavioral influences emerge, see Weinmann, Schneider & vom Brocke, *supra* note 14, at 435 (as new devices “emerge with new interaction and interface design elements, such as kinetics, virtual reality, and holograms . . . designers will need to understand the potential behavioral effects of these new technologies on people’s judgment and decision-making.”).

105. Schneider, Weinmann & vom Brocke, *supra* note 14, at 71.



Digital nudging works by modifying either *what* is presented (the content of a choice) or *how* it is presented (the visualization of a choice on the digital interface).<sup>106</sup> For example, if a mobile payment app presents a tipping option by default, such that users who prefer not to tip must select “no tip” or unselect “tip” it likely builds on status quo bias to nudge people into giving tips.<sup>107</sup> As another example, when an online marketplace indicates that a certain number of other users are currently viewing the same item, a user may be nudged to choose that item because it evokes the psychological effects of social norms, loss aversion, and scarcity.<sup>108</sup> Visual attributes of interfaces, such as their colorfulness, visual complexity, and fonts also influence choices.

Digital choice architecture can be a very powerful tool. First, digital choice architecture operates at the point of the decision-making,<sup>109</sup> thereby increasing the likelihood that a nudge would be effective. Second, digital nudges are fairly easy, quick, and cheap to implement. Moreover, the immediate availability of data on user behavior enables testing and optimizing the effectiveness of digital nudges in iterative cycles.<sup>110</sup>

Section III reviews several digital nudges that were identified in other contexts, and explains how they may operate in the context of online courts. Before turning to it, let us place the discussion in the context of previous work on the impact of ODR on disputants, process, and outcome.

### *c. The impact of technology in ODR*

The idea that ODR platforms shape the dispute resolution process and the behavior of the parties is not new. Katsh & Rifkin articulated the idea that in ODR, the platform becomes an influential *Fourth Party*:<sup>111</sup> an actor in the process, much like the disputants and the third party neutral. They argued that the appearance, arrangement, and functions of the system structure what is (and what is not) possible and likely to occur.<sup>112</sup> Other scholars also expressed concerns about the heightened risks arising out of what now we might call the digital choice architecture of ODR systems, and the potential effects of technology on ODR system design and access to justice.<sup>113</sup> Larson questioned specifically the manipulative risk arising out of the interplay between ODR process design and interface design:

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106. *Id.* at 69.

107. *Id.*

108. *Id.* at 69-70; Tobias Mirsch, Christiane Lehrer & Reinhard Jung, *Digital Nudging: Altering User Behavior in Digital Environments*, PROCEEDINGS OF THE 13TH INTERNATIONAL CONFERENCE ON WIRTSCHAFTSINFORMATIK 634, 641 (2017).

109. Schneider, Weinmann & vom Brocke, *supra* note 14, at 69; *see also* Linda Miesler, Corinne Scherrer, Roger Seiler & Angela Bearth, *Informational Nudges as an Effective Approach in Raising Awareness Among Young Adults About the Risk of Future Disability*, 16 J. CONSUMER BEHAV. 15 (2016).

110. Mirsch, Lehrer & Jung, *supra* note 108, at 644.

111. KATSH & RIFKIN, *supra* note 23, at 93-94.

112. *Id.* Thus, “the fourth party” is a particular case of the broader concept of “code is law.” *See* LAWRENCE LESSIG, *CODE: AND OTHER LAWS OF CYBERSPACE*, VERSION 2.0 6 (1999) (arguing that the design of online environments is not neutral but rather manifests particular values and affects users in explicit and implicit ways).

113. Orna Rabinovich-Einy & Ethan Katsh, *Lessons from Online Dispute Resolution for Dispute System Design*, in *ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE* 39 (Mohamed S. Abdel Wahab et al., eds., 2012); Rabinovich-Einy & Katsh, *supra* note 28; KATSH & RABINOVICH-EINY, *supra* note 2, at 39-56, 149-80.

When parties are asked to choose an option... how are those options determined? ... [when] a default option is available, upon what considerations was that default option based? Is the program designed to guide parties to a settlement regardless of whether that is their desire under these circumstances?”<sup>114</sup>

In addition, in the related context of online legal services, scholars noted the importance of evaluating interface usability<sup>115</sup> and user experiences as “a key metric to complement outcome-based metrics. . . [because] it can encourage higher engagement, comprehension, and follow-through with legal services.”<sup>116</sup>

Alas, there are still significant knowledge gaps regarding these issues. Only a few empirical studies explored how the design of ODR systems impacts the dispute resolution process. Generally, they focused on user *perceptions* (usually in terms of satisfaction or procedural justice) and not on user *behavior* in terms of choices and actions. For example, I conducted experiments that measured the effect of different ODR process designs and technologies on disputants’ procedural justice experiences in different contexts.<sup>117</sup> Other studies looked at disputants’ satisfaction, experiences and evaluations in contexts such as online divorce mediation<sup>118</sup> and online court-connected mediation for small claims.<sup>119</sup> By now, there are data available also from user satisfaction surveys conducted by judicial ODR platforms. For example, CRT publishes a periodical user satisfaction survey, which elicits participants’ perceptions on issues such as its fairness, professionalism, ease-of-use, and timeliness;<sup>120</sup> and HMCTS periodically reports the results of a general user-satisfaction survey of its currently running OSC civil money claims implementation.<sup>121</sup>

114. David Allen Larson, “*Brother, Can You Spare a Dime?*” *Technology Can Reduce Dispute Resolution Costs When Times Are Tough and Improve Outcomes*, 11 *NEV. L.J.* 523, 548-49 (2001). Similarly, Rafael Morek suggested that “in ODR, inefficiency, errors, or bias can be hidden under nicely crafted computer interfaces based on the way the program was constructed.” Rafal Morek, *The Regulatory Framework for Online Dispute Resolution: A Critical View*, 38 *U. TOL. L. REV.* 163 (2006).

115. See, e.g., David R. Newman & U. Doherty, *Making the Law Accessible to Non-Lawyers: Effects of Different Kinds of Expertise on Perceived Usability of Online Legal Services*, 27 *BEHAV. & INFO. TECH.* 423 (2008).

116. Hagan, *supra* note 71, at 402-03.

117. See Sela, *supra* note 29 (comparing participants’ procedural justice perceptions in a judicial ODR process that involved either text-based or video-based asynchronous communication); Ayelet Sela, *Can Computers Be Fair? How Automated and Human-Powered Online Dispute Resolution Affect Procedural Justice in Mediation and Arbitration*, 33 *OHIO ST. J. ON DISP. RESOL.* 91 (2018) (examining the sensitivity of disputants’ procedural justice perceptions in an e-commerce ODR process to variations in the dispute resolution method (mediation vs. arbitration) and in the perceived agency of the ODR program (being told that the third party neutral was either a person or software)).

118. Martin A. Gramatikov & Laura Klaming, *Getting Divorced Online: Procedural and Outcome Justice in Online Divorce Mediation*, 14 *J.L. & FAM. STUD.* 97 (2012) (examining female and male divorcees’ perceptions on the quality of the online procedure and the quality of the outcome).

119. Marc Mason & Avrom Sherr, *Evaluation of the Small Claims Online Dispute Resolution Pilot (Sept. 2008)* [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1407631](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1407631) (evaluating disputants’ reports of usability, cost and satisfaction with outcome in a pilot of a court-connected online mediation process).

120. See, e.g., *Participant Satisfaction Survey – April to October 2018*, *CIV. RESOL. TRIBUNAL*, <https://civilresolutionbc.ca/participant-satisfaction-survey-april-october-2018-2/> (last visited Apr. 23, 2019) [hereinafter CRT Participant Satisfaction Survey].

121. See Acland-Hood, *supra* note 67 (reporting in February 2019 with respect to its civil money claim filing service that “nine out of 10 users saying they are satisfied or very satisfied with the service”). To date, HMCTS has not publicized the criteria or questions that were used to assess user satisfaction, making it difficult to validate the meaning of these figures; see also Byrom, *supra* note 30, at 20.

Unlike user perceptions and experiences, the behavioral effects of ODR, including in courts, are understudied. While the results of the CRT survey point to a fairly positive experience,<sup>122</sup> nearly a third of the respondents reported that the process was not easy to understand or use, and nearly a quarter felt that CRT did not provide them with information that prepared them for the dispute resolution process.<sup>123</sup> Some of the difficulty is likely attributed to content and process design, but it is also likely that SRLs' experience and performance could be improved by modifying UX/UI elements based on digital choice architecture research. More importantly, as I argue in the following sections, evidence-based choice architecture is required in order to ensure the neutrality of courts, avoid bias, and promote the self-determination of litigants.

### III. DIGITAL CHOICE ARCHITECTURE AND ONLINE COURTS

Evoking the framework of digital choice architecture is a useful addition to the discourse on ODR, and specifically, online courts. This framework is commonly used to examine the impact of digital interfaces on the behavior of lay users (as opposed to professional users), such as consumers and students. In order to apply this body of work to online courts the concepts need to be adjusted and tested in the context of litigation-related decision-making. Online courts guide lay SRLs through a digital process, presenting them with new information and requiring them to make important choices in an unfamiliar domain, which may affect their claims and defenses. Applying the digital choice architecture framework in this context has two important advantages. First, it fills the knowledge gap regarding the behavioral effects of ODR, and specifically—of online courts. Second, it is useful because it takes into account the impact of both content and form on SRLs' decision-making. To that end, this section explores attributes of human decision-making in digital interfaces and specific elements of digital choice architecture that are expected to impact SRLs' behavior and decision-making in online courts.

#### *a. Attention scarcity and selective attention*

Studies consistently find that decisions that are made on screens are taken under conditions of inherent *attention scarcity*<sup>124</sup> and *selective attention*.<sup>125</sup> As such, they are particularly susceptible to the influence of biases and heuristics, which may lead to poor quality decisions.<sup>126</sup> For example, research on financial decisions found

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122. 75% of respondents said they would recommend the CRT to others; 81% felt they were treated fairly. CRT Participant Satisfaction Survey, *supra* note 120.

123. *Id.*

124. Studies find that in online settings, people exhibit a reduced attention span compared to offline settings. See, e.g., Daniel M. Oppenheimer, Tom Meyvis & Nicolas Davidenko, *Instructional Manipulation Checks: Detecting Satisficing to Increase Statistical Power*, 45 J. EXPERIMENTAL SOC. PSYCH. 867 (2009) (finding considerably higher failure rates in an attention filter when it was administered online compared to paper and pencil setting. The filter in this case involved reading a single paragraph of instructions before filling out a short questionnaire.).

125. BENARTZI & LEHRER, *supra* note 14.

126. *Id.* at 15-17; 68-70. These adverse effects are exasperated by the fact that digital choice environments tend to generate an information overload, as users are exposed to a continuous flow of information and alerts, a multitude of options, and abundance of words. *Id.* at 25 (also citing a study that found that

that people are particularly prone to making deficient decisions on computer interfaces,<sup>127</sup> and that the effect is accentuated if the decision is made on a smartphone.<sup>128</sup> One reason is that on digital devices, people tend to take decisions in a fast and automated fashion,<sup>129</sup> often failing to process the relevant information in order to make an optimal decision.<sup>130</sup> This effect is expected to be pronounced in online courts, which require SRLs who lack domain expertise to make litigation-related decisions. A study comparing the ability of lawyers and non-lawyers to retrieve information from online legal websites found that non-lawyers could not process information as fully as lawyers, pointing to implications on their ability to understand and use this information.<sup>131</sup>

The heightened susceptibility of online decision-making to the influence of biases and heuristics is met with multiple UX/UI features that operationalize decision-making biases and heuristics in digital choice environments. Whether and how these digital nudges affect SRL choices and behaviors in online courts is a question that requires empirical answers. In Section IV I discuss possible methodologies for carrying out such an examination. However, a first step, which immediately follows, is to identify relevant mechanisms and hypothesize their effects.

*b. Radio buttons, check boxes, drop down menus, sliders, and text boxes*

Features such as *radio buttons, check boxes, drop down menus, sliders, and text boxes* can be used to nudge people to choose certain options.<sup>132</sup> For example, a choice among multiple discrete options that are presented with check boxes, radio buttons, or dropdown menus can be nudged by presenting the desired option as a preselected default (status quo bias); adding a decoy option (decoy effect); and positioning an option earlier (primacy effect), later (recency effect), or in the middle (middle option bias) of the list.<sup>133</sup> When a choice involves continuous options (e.g. indicating a sum of money), choice architects can leverage anchoring effects. For instance, when using a slider to elicit numerical responses, the slider endpoints and its initial position serve as implicit anchors (the latter feature also exploits status quo bias).<sup>134</sup> Similarly, input fields such as text boxes can be pre-populated with values (for quantities) that can be edited.<sup>135</sup>

Radio buttons, check boxes, sliders and text boxes are key features of the choice environment of online courts. They are used in claim and response web-forms, diagnostic questionnaires, and for process navigation and information collection. Thus, it is important to test their operation in the context of SRLs' choices and actions.

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having an unread email in one's mailbox is so distracting that it reduces one's effective IQ score by roughly ten points).

127. Mirsch, Lehrer & Jung, *supra* note 108, at 635.

128. BENARTZI & LEHRER, *supra* note 14, at 40-43.

129. *Id.*

130. Mirsch, Lehrer & Jung, *supra* note 108, at 635.

131. See Newman & Doherty, *supra* note 115.

132. For a useful review, see Schneider, Weinmann & vom Brocke, *supra* note 14, at 70-71.

133. *Id.* Clearly, some of the mechanisms described contradict or overlap each other. As noted in the previous section, the impact of biases and heuristics depends on the type of decision, the context, and the decision-maker and should thus be tested in each specific circumstance.

134. Schneider, Weinmann & vom Brocke, *supra* note 14, at 70-71.

135. *Id.*

Figure 1 shows a screen of a judicial ODR system by Matterhorn, demonstrating the use of radio buttons and text boxes. In this example, the order of response options to the first question can affect the likelihood of their being chosen. Similarly, it is important to examine whether SRLs' procedural choices change as a result of default options, such as a pre-checked check-box or pre-populated text box, that set a default choice for a procedural pathway or remedy. There may be valid justifications for using a default option, but they involve ethical risks,<sup>136</sup> which online court designers should account for. They can also take steps to mitigate the risk of undue influence, by supporting litigants' freedom of choice and autonomy. Examples include making users aware of the default<sup>137</sup> or as I suggest in the next section: designing a choice environment that encourages users to deliberate the choice.

What best describes your employment situation? Choose one.

- I work full-time
- I work part-time (one or more jobs but fewer than 40 hours per week)
- I work seasonally or sporadically
- I work odd jobs/gigs when I can get them
- I'm retired
- I'm unemployed

Average monthly income from employment:

\$

Monthly income from sources other than employment, such as retirement, investments, interest, alimony, other household income, odd jobs:

\$

[← Previous](#) CONTINUE →

Figure 1: Matterhorn Ability to Pay Assessment<sup>138</sup>

### c. Choice overload

Digital interfaces make it easy to add choices as well as options for each choice. On the face of things, increasing the variety of options appears to promote users' self-determination because it improves their ability to choose an option that accurately reflects their preferences and interests. However, as Benartzi and Lehrer note, "[w]hile too little choice is stifling, having too many choices can be paralyzing; our bounded brain is overwhelmed, and we end up picking badly or giving up."<sup>139</sup>

136. See N. Craig Smith, Daniel G. Goldstein & Eric J. Johnson, *Choice Without Awareness: Ethical and Policy Implications of Defaults*, 32 J. PUB. POL'Y & MKTG. 159 (2013).

137. Johnson et al., *supra* note 84.

138. The screen shot was captured from a webinar which Materhorn made publically available: *Webinar Materials: Ability-to-Pay Assessment and ODR*, MATTERHORN (May 22, 2018), <https://getmatterhorn.com/webinar-materials-ability-to-pay-assessment-and-odr/> (last visited Apr. 22, 2019).

139. BENARTZI & LEHRER, *supra* note 14, at 166.

In offline settings, offering consumers too many options was found to result in fewer purchases.<sup>140</sup> A similar effect was observed in much more complex decisions, for example, when participation rates in 401(k) retirement plans decreased after the choice set of mutual funds was enlarged.<sup>141</sup> A familiar example in online settings is having too many privacy configuration options, which users can find confusing and difficult to choose from.<sup>142</sup> In addition to choice overload in substantive choices (manifested in the number of options, as shown in Figure 1), digital interfaces often create a “navigation overload” as users often encounter “the vast assortment of menu bars, buttons, pop-up windows, and search tools”<sup>143</sup> which they are required to operate.

Experimental studies have validated a number of effective strategies for improving decision quality—and satisfaction—under conditions of choice overload. One such strategy is to use “sequential tournament-style architecture;”<sup>144</sup> another strategy, which seems more applicable in the context of online courts, is to categorize options into consideration sets, typically consisting of less than five options. Users can then navigate through a series of choices among manageable option sets.<sup>145</sup> Research further shows that the way in which a set of options or attributes are partitioned into groups (for example, in a single list or divided into categories) can dramatically impact choices.<sup>146</sup> The challenge is to create categories in a way that would help SRLs locate and choose the option that best serves their interest. Digital interfaces offer multiple strategies for creating manageable option sets,<sup>147</sup> including the ability to categorize options in a customized fashion based on users’ priorities and what is most relevant for them. In online courts, these strategies could be devised and implemented for entire classes of litigants or disputes, rather than individual users, based on preliminary user studies.

Choice architecture strategies that are applicable in this context include letting users apply simple filters to a list of options or use dynamic online wizards. Online courts already use such wizards in the diagnostic triage phase, to help SRLs identify

140. Avni M. Shah & George Wolford, *Buying Behavior as a Function of Parametric Variation of Number of Choices*, 18 PSYCHOL. SCI. 369 (2007); Sheena S. Iyengar & Mark R. Lepper, *When Choice is Demotivating: Can One Desire Too Much of a Good Thing?*, 79 J. PERSONALITY & SOC. PSYCHOL. 995 (2000).

141. Sheena S. Iyengar, Gur Huberman & Wei Jiang, *How Much Choice is Too Much? Contributions to 401(K) Retirement Plans*, in PENSION DESIGN AND STRUCTURE: NEW LESSONS FROM BEHAVIORAL FINANCE 83 (Olivia S. Mitchell & Stephen P. Utkus eds., 2004) (finding that for every ten additional mutual funds the participation rate decreased by roughly 2%).

142. Jameson et al., *supra* note 14, at 49 and 12.2.3.

143. BENARTZI & LEHRER, *supra* note 14, at 167-68.

144. See Tibor Besedeš et al., *Reducing Choice Overload Without Reducing Choices*, 97 REV. ECON. & STAT. 793, 793-94 (2015) (reporting results of an experiment showing that sequential tournament architecture leads to significantly higher frequency of optimal choice than either simultaneous choice or sequential elimination. The authors explain that “[i]n the sequential tournament architecture, the sixteen options are randomly divided into four sets of four options each. In the first four rounds, the decision maker selects one option from each of the four smaller sets. In the final (fifth) round, the subject selects from among the four previously selected options.” In other words, the final choice is the “winner” after all rounds of the tournament. Because each round consists of a manageable consideration set, users are presumably more likely to be able to identify the option they want most (the option that best serves their interests).).

145. Jameson et al., *supra* note 14, at 62-63; BENARTZI & LEHRER, *supra* note 14, at 167-76.

146. See, e.g., Craig R. Fox, David Bardolet & Daniel Lieb, *Partition Dependence in Decision Analysis, Resource Allocation, and Consumer Choice*, in 3 EXPERIMENTAL BUSINESS RESEARCH 229 (Rami Zwick & Amnon Rapoport eds., 2005); THALER & SUNSTEIN, *supra* note 10.

147. See Jameson et al., *supra* note 14, at 63-70.

the problems and issues they need to address.<sup>148</sup> Arguably, this choice architecture strategy could be employed also in the dispute resolution process, to help SRLs customize procedural and substantive choices throughout the litigation. Finally, let us note the potential of using automated personalization to counter choice overload, by presenting SRLs with a minimal option set that was automatically tailored for them based on a profiling scheme. However, as discussed in Section III.f, the application of automated personalization in online courts is controversial, as it raises grave normative and ethical concerns.

#### *d. Display induced nudges: intuition or deliberation*

*Display induced biases* occur when people choose an option that is different from their stated preference due to the location or visualization of options on the screen.<sup>149</sup> As Benartzi & Lehrer explain, “the visual system is shaping our decision long before we have even had a chance to consider our options; the mechanics of sight precede the deliberations of the mind.”<sup>150</sup> At the same time, research suggests several strategies for displaying options and text on screens in ways that encourage deliberation or improve the likelihood that users pursue their own stated preferences.

##### *i. Visual Bias to the Middle*

Research by Elena Reutskaja and her colleagues suggests that there is a visual bias to the middle, such that users are nudged to select whichever option appears in the middle of the screen.<sup>151</sup> In their experiment, people were required to choose a food snack, under time pressure, among options that were presented on a computer screen as tiles organized in a matrix. They found that subjects were more likely to choose the option presented in the middle of the screen, even when it was not their stated preference.<sup>152</sup> The researchers further tracked subjects’ gaze, observing it was almost invariably fixated first at the middle of the screen.<sup>153</sup> Importantly, this display bias to the middle can be used to nudge people to choose the option that best serves their interests. For example, in the described experiment, when subjects’ favorite snack-option was placed in the center of the screen, they chose it 91 percent of the times.<sup>154</sup> Notably, the operation of visual biases may differ depending on the number of options and the way they are organized on the screen.<sup>155</sup>

148. The CRT Solution Explorer is one example. See CRT Solution Explorer, *supra* note 52.

149. BENARTZI & LEHRER, *supra* note 14, at 167-70.

150. *Id.* at 73.

151. Elena Reutskaja et al., *Search Dynamics in Consumer Choice Under Time Pressure: An Eye-Tracking Study*, 101 AM. ECON. REV. 900, 917 (2011).

152. *Id.* at 922-23. Subjects were asked to rank how much they liked various snack food items and were then shown the items on a screen and given a limited time to indicate which snack item they would like to receive at the end of the experiment. When options were presented in a 3x3 matrix, subjects were 60% more likely to choose the snack option in the middle, regardless of what it was. Strikingly, when subjects’ least preferred snack was in a central screen location, they were able to find their most preferred snack-option only about 30% of the time.

153. *Id.* at 917. (in a 3x3 matrix, the middle tile; in a 4x4 matrix, in the four central tiles. The initial spots subjects looked at remained the most frequently watched also in subsequent fixations.).

154. *Id.* at 921.

155. *Id.* (stating that the study also tested a display setting with no clear middle and finding that when four options were shown in a 2x2 matrix, subjects were most likely to first look at the top left quadrant,

In order to evaluate the applicability of such biases to SRLs, it is necessary to test them in the specific context of online courts. Even though online court procedures are typically not time-pressured, their streamlined design encourages fairly quick navigation through a series of choices among options, sometimes presented in a tile matrix. For example, the CRT Solution Explorer requires users to select from a matrix of tiles, each representing a category of legal problems, the category that best describes their dispute (Figure 2 shows the first of two rows of tiles). In this example, a lay claimant who is owed money by a client that did not pay in full for a product or a service, may be prompted to select the more centrally located “loan and debts” option rather than the more accurate option of “buying and selling goods and services.”

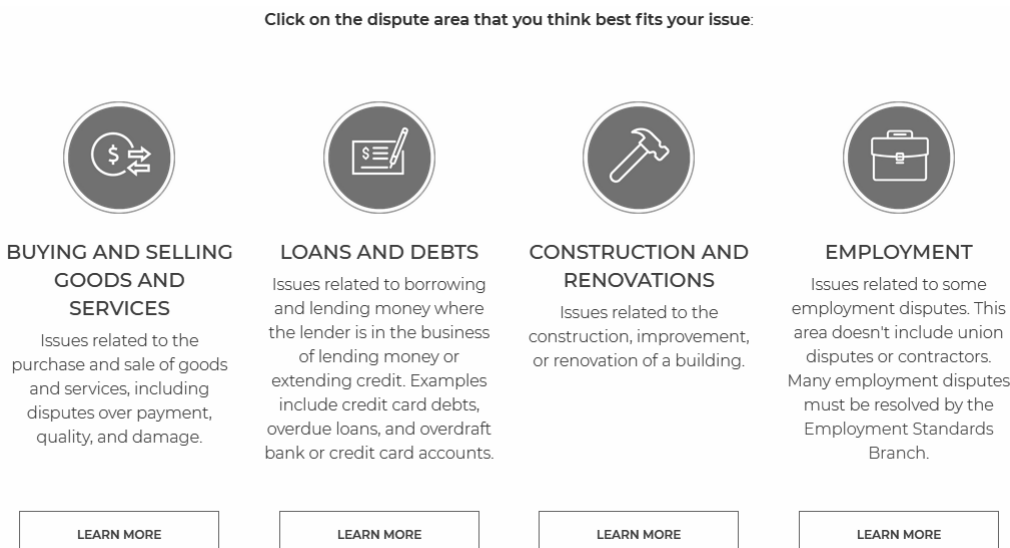


Figure 2: CRT Small Claims Solution Explorer<sup>156</sup>

### *ii. Inducing deliberation through horizontal presentation of options*

Online court designers can leverage display-induced biases to improve SRLs' understanding of each available option and encourage them to carefully deliberate over their choice, thereby supporting informed and reflective decision-making. Specifically, visual nudges can support the most straightforward deliberation tool: providing information in an effective way.<sup>157</sup>

One set of visual choice architecture strategies involves organizing information on the screen in a way that induces deliberation.<sup>158</sup> This strategy is particularly

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consistent with their reading direction in English. The results might have been different if the subjects were reading in a language which reads right to left, such as Hebrew.).

156. CRT Solution Explorer, *supra* note 52.

157. See Karen Yeung, *Nudge as Fudge*, 75 MOD. L. REV. 122 (2012).

158. BENARTZI & LEHRER, *supra* note 14, at 75-77.



helpful when users need to consider and compare options across multiple attributes.<sup>159</sup> For example, one study examined the impact of horizontal and vertical presentation of options (in this case: different computer models), when each option had multiple attributes that were relevant for the decision (e.g. screen size, type of processor, price).<sup>160</sup> According to its findings, the organization of options on the screen influenced what people looked at, and as a result, their decisions, such that a horizontal organization of options nudged users to compare options across their different attributes more than a vertical organization.<sup>161</sup>

In the context of online courts, such organization of information could be relevant when SRLs weigh options that comprise multiple attributes or involve multiple implications. Examples include whether to request an in-person hearing or a video hearing, comparing settlement offers, or considering whether or not to roll a settlement into judgment. Similarly, as mentioned earlier, the way in which options (or attributes) are partitioned into groups can significantly influence what people choose.<sup>162</sup> In online courts, it would be useful to test, for instance, whether dividing procedural options into categories, or grouping available remedies, influences SRLs' choices.

### *iii. Inducing deliberation through effective use of fonts*

Online court designers often use fluent fonts, that is, clear, easily readable, fair sized and dark colored fonts. Arguably, they use these fluent fonts because they appear to increase the usability, user-friendliness, likeability and perceived accessibility of the digital court interface, as the literature on online services for lay users prescribes.<sup>163</sup> However, early research suggested that disfluent fonts are more likely to encourage cognitive reasoning. A font is perceived as disfluent if its design attributes make it more difficult to read. Examples of font disfluency include using minimal spacing between the letters or letters that are not easily differentiated, presenting information in smaller size font or in faint-colored fonts or using fonts that readers are not accustomed to read.

For example, one study found that disfluent fonts improve people's retention of information they read and encourage increased reflection and cognitive processing.<sup>164</sup> Another study tested the effect of using a disfluent font on subjects' performance in a cognitive reflection test.<sup>165</sup> The test required them to answer tricky questions that measure the extent to which they rely on mental shortcuts and

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159. Jameson et al., *supra* note 14, at 60-70 (discussing attribute-based choice and relevant decision-support strategies).

160. Savannah Wei Shi, Michel Wedel & F. G. M. Pieters, *Information Acquisition During Online Decision Making: A Model-Based Exploration Using Eye-Tracking Data*, 59 *MGMT. SCI.* 1009 (2013).

161. *Id.*

162. See, e.g., Fox, Barolet & Lieb, *supra* note 146; THALER & SUNSTEIN, *supra* note 10.

163. See Hagan, *supra* note 71; Newman & Doherty, *supra* note 115.

164. See, e.g., Connor Diemand-Yauman, Daniel M. Oppenheimer & Erikka B. Vaughan, *Fortune Favours the Bold ("and the Italicized"): Effects of Disfluency on Educational Outcomes*, 118 *COGNITION* 111 (2011) (finding that presenting students with reading materials across a wide range of subjects and difficulty levels in disfluent fonts improved their performance in subsequent tests compared to students who read the same materials in fluent fonts).

165. Adam L. Alter et al., *Overcoming Intuition: Metacognitive Difficulty Activates Analytic Reasoning*, 136 *J. EXPERIMENTAL PSYCHOL.: GEN.* 569 (2007).

instinctive responses.<sup>166</sup> The results seemed to suggest that subjects who read questions in a disfluent font (10 percent gray, 10-point) were less likely to answer questions incorrectly compared to subjects who read them on a fluent font (black, 12-point), because the more effortful reading made them pay closer attention to the question and reflect on it before answering.<sup>167</sup> Despite the appeal of these results, more recent studies found no evidence that disfluent fonts activate improved analytic reasoning.<sup>168</sup> However, the latter studies did find that people spend more time answering questions when they are displayed in a disfluent font,<sup>169</sup> possibly suggesting that disfluent fonts slow the pace of task completion, thereby creating, at least structurally, more room for reflection.

The idea of designing legal digital choice environments that make task completion *less* effortless (or the process *less* streamlined) as a means to encourage deliberation and informed decision-making resonates other recent suggestions. Writing in the context of managing online privacy issues, Arnout Terpstra and his colleagues present a design model that relies on “friction” to stimulate reflective thinking and support users’ knowledge, evaluation and choice.<sup>170</sup> In the context of online courts, Dorcas Quek Anderson points to the “tension between accessibility and informed participation,” arguing specifically that it is “challenging to design a court ODR system to ensure that explanations are read by the users... and also genuinely understood.”<sup>171</sup> Whether disfluent fonts can improve SRLs’ ability to understand and deliberate litigation-related issues requires a careful empirical examination. At this point, online court designers should at least consider the possibility that “[t]he best design is not about making it as easy as possible on the eyes. Rather, it is about balancing the demands for cognitive ease with the benefits of desirable difficulty; the craving for speed with the benefits of slowing us down.”<sup>172</sup>

Consider, for example, Figure 3, a screen captured from the new online civil money claim process launched (in beta) by the courts and tribunals service in England and Wales (HMCTS).

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166. The test was introduced in Shane Frederick, *Cognitive Reflection and Decision Making*, 19 J. ECON. PERSP. 25 (2005). Consider the following sample question from the test: “A bat and a ball cost \$1.10. The bat costs \$1.00 more than the ball. How much does the ball cost? \_\_\_cents”. *Id.* at 26. As Frederik notes, the intuitive response is that the ball costs 10 cents, but upon reflection it becomes clear that the ball costs 5 cents and the bat costs \$1.05. *Id.* at 26-27.

167. Finding that “[w]hereas 90% of participants in the fluent condition *supra* answered at least one question incorrectly, only 35% did so in the disfluent condition.” Alter et al., *supra* note 165, at 570. The findings further suggest that fonts that are more difficult to read prompted subjects to view the task as more difficult, and therefore reflect more carefully and engage in more analytical processing, resulting in their making less mistakes. *Id.* at 575.

168. Andrew Meyer et al. *Disfluent Fonts Don’t Help People Solve Math Problems*. 144 J. EXPER. PSYCH.: GENERAL, e16 PSYCH. (2015) (analyzing the results of seventeen studies of the effect of disfluent fonts on cognitive reasoning).

169. *Id.*

170. Arnout Terpstra, Alexander P. Schouten, Alwin de Rooij & Ronald E. Leenes, *Improving Privacy Choice through Design: How Designing for Reflection Could Support Privacy Self-Management* (May 17, 2019) (unpublished manuscript, on file with author)

171. Dorcas Quek Anderson, *Ethical Concerns in Court-Connected Online Dispute Resolution* 1 INTL. J. ONLINE. DISP. RESOL. 20, 31 (2019).

172. BENARTZI & LEHRER, *supra* note 14, at 135.

Figure 3: HMCTS Civil Money Claims (Beta)—Defendant Response.<sup>173</sup>

On this screen, defendants select one of three options to respond to a civil money claim that was filed against them. The website uses a fairly fluent font, displayed in either black, light gray or blue, in varying sizes, and lists options vertically. It is important to test whether defendants' likelihood of selecting certain options is sensitive to the font, its color or its size, as well as to the alignment or order of options. Notably, it is useful to test whether using a fluent (black, bold) font for options titles compared to a disfluent (light gray, non-bold) explanatory text and light blue help-text nudges users to skip processing this decision-supporting information and thus make less informed and deliberate decisions. If such effects are found, then the efforts to streamline the process and make it user-friendly, accessible, informative and supported will come at the cost of impairing the quality of SRLs' procedural and substantive decisions.

As with any other nudging technique, display-induced nudges such as bias to the middle, horizontal presentation of options or disfluent fonts will not make a difference for all users or tasks. However, given their potential to improve SRLs' understanding of online court procedures and relevant legal matters as well as to support informed and deliberate decision-making, it is important to study their operation in the specific context of online legal proceedings.

#### *e. Colorfulness and visual complexity nudge usability and trustworthiness*

Online first impressions play a critical role in shaping users' judgments of the quality, usability and trustworthiness of digital platforms.<sup>174</sup> Most people develop these judgments in a fraction of a second, based on their perception of the aesthetics

173. Figure 3 was captured from HMCTSGovuk, *supra* note 63.

174. See, e.g., Gitte Lindgaard et al., *An Exploration of Relations Between Visual Appeal, Trustworthiness and Perceived Usability of Homepages*, 18 ACM TRANSACTIONS ON COMPUTER-HUMAN INTERACTION 1 (2011).

of the website.<sup>175</sup> This perception is shaped primarily by the appeal of the website's *visual attributes*,<sup>176</sup> such as its colorfulness and visual complexity.<sup>177</sup>

The *colorfulness* of a digital interface refers to the color scheme as well as to the intensity of colors and the range of colors. Such colorfulness attributes can significantly impact users' response to the digital interface, navigation through the platform, and choices.<sup>178</sup> The *visual complexity* of a digital interface is determined by the amount of information on a given screen and the way it is presented.<sup>179</sup> Users generally react less favorably to visually complex digital interfaces because they find them less appealing.<sup>180</sup> Factors that create visual complexity include asymmetrical design and a high number of distinct groups of text (especially if they are not balanced over the available space).<sup>181</sup> Arguably, visual complexity also makes it more difficult to perceive and process relevant information, and thus does not support informed and deliberate decision-making.

While these insights seem fairly intuitive, online courts vary in terms of their visual complexity and colorfulness. For example, the landing page of Money Claim Online, a judicial ODR platform operated by HMCTS welcomes claimants with a fairly visually complex landing page, as captured in Figure 4.

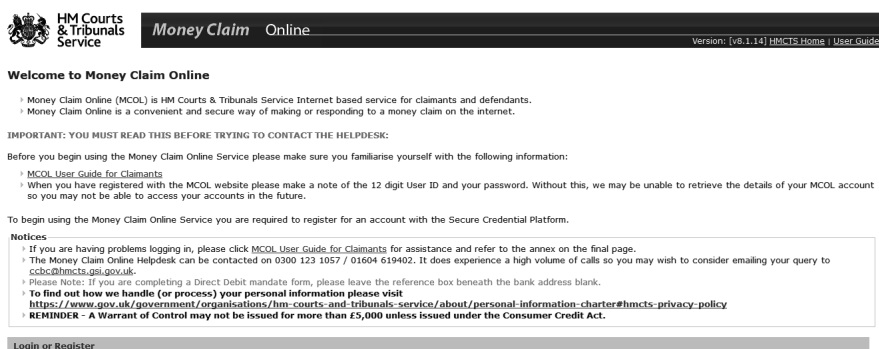


Figure 4: Money Claim Online Landing Page<sup>182</sup>

In comparison, Figure 5 depicts the significantly less visually complex start page of HMCTS' beta-tested civil money claims portal.

175. BENARTZI & LEHRER, *supra* note 14, at 38-39.

176. Lindgaard et al., *supra* note 174.

177. See Katharina Reinecke & Krzysztof Z. Gajos, *Quantifying Visual Preferences Around the World*, PROCEEDINGS OF THE SIGCHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS 11 (2014).

178. *Id.*; see, e.g., Naomi Mandel & Eric J. Johnson, *When Web Pages Influence Choice: Effects of Visual Primes on Experts and Novices*, 29 J. CONSUMER RES. 235 (2002); BENARTZI & LEHRER, *supra* note 14, at 45 (referring to a conversation with Reinecke). Reinecke measured color intensity in terms of the amount of non-white pixels on the screen and range in terms of the percentage of pixels that were close to the sixteen standardized colors of the HTML 4.01 specification.

179. BENARTZI & LEHRER, *supra* note 14, at 45.

180. *Id.* at 47.

181. *Id.*

182. Figure 4 was captured from [www.moneyclaim.gov.uk/web/mcol/welcome](http://www.moneyclaim.gov.uk/web/mcol/welcome)

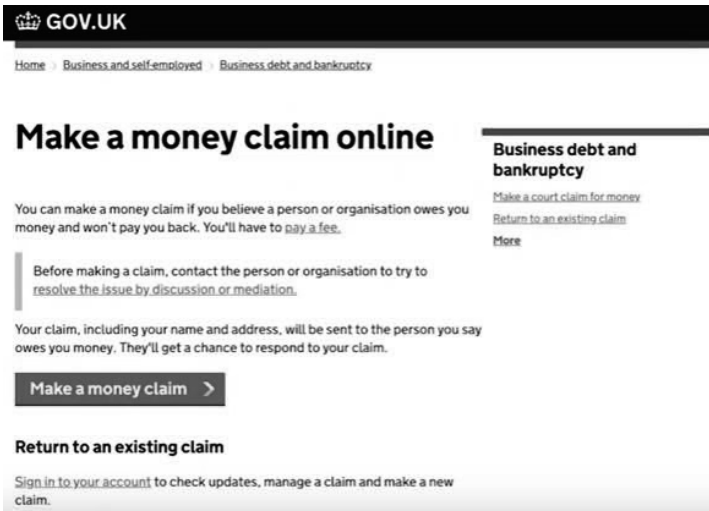


Figure 5: HMCTS Civil Money Claims (Beta Testing)<sup>183</sup>

Consider also the user interface of a mandatory ODR system for small claim cases launched by *Matterhorn* in the Justice Court in West Valley City, Utah, as captured in Figure 6. The system organizes the interactions of the two litigants and the court-facilitator in a chat-like interface, listing them chronologically and differentiating them by color, using a warmer red and orange alongside the white and blue color scheme that is common to many legal websites. The UX/UI depicted in Figure 6 is likely intended to encourage informal settlement discussions between lay SRLs.

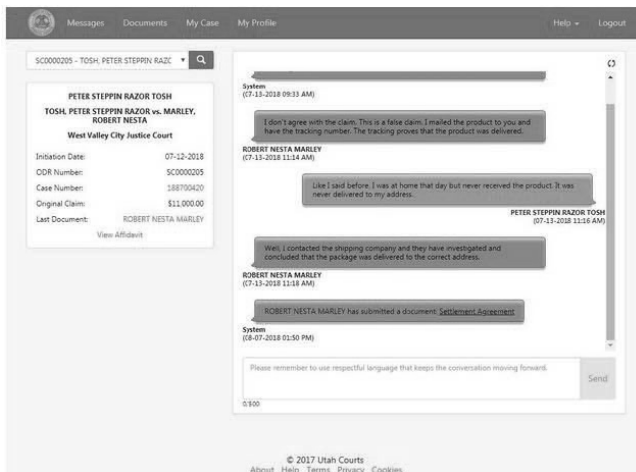


Figure 6: Utah Court Small Claim Mediation (Matterhorn)<sup>184</sup>

183. Figure 5 was captured from HMCTSgovuk, *supra* note 63.

184. Bob Ambrogi, *Utah Courts Begin Unique ODR Pilot for Small Claims Cases Tomorrow*, LAW SITES (Sept. 4, 2018), <https://www.lawsitesblog.com/2018/09/utah-courts-begin-unique-odr-pilot-small-claims-cases-tomorrow.html>.

Technology now enables operationalizing and measuring the colorfulness and visual complexity of websites through automated algorithmic tools.<sup>185</sup> Thus, online courts can fairly easily measure their colorfulness and visual complexity scores and examine whether changing them improves user experience and performance, promotes the perceived legitimacy and trustworthiness of the online court, and reduces altogether the rate of user disengagement with the process. I discuss methodological options for such an undertaking in Section IV.

Any attempt to design the colorfulness and visual complexity of a website should take into account the fact that aesthetic preferences vary across demographics. Specifically, attributes such as level of education, age, gender, and nationality are correlated with preferences to varying degrees of website colorfulness and visual complexity.<sup>186</sup>

### *f. Personalization*

Digital platforms are in a unique position to personalize the choice environment for each of their individual users or for classes of users that are grouped based on identifiable attributes. As discussed in Section II.a, people vary in their decision-making styles and their sensitivity to different types of bias, such that they may be affected differently by a given choice environment. Personalization allows digital platforms to dynamically tailor the choice architecture (including content, visualization, and procedure) in real time in order to increase its effectiveness on specific users with particular attributes.<sup>187</sup> Such dynamic personalization improves the chances of the choice environment to influence users' choices and behavior in a given direction. It can work to either counter or take advantage of known attributes that shape decision-making.

Digital platforms can enhance their personalization practices by collecting and processing information about their users, such as their demographics, interests, emotional state, technological efficacy and other attributes.<sup>188</sup> Notably, big-data-driven personalization can reconfigure a user's choice environment in response to

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185. See Reinecke & Gajos, *supra* note 177.

186. BENARTZI & LEHRER, *supra* note 14, at 48-49 (referring also to the large scale study of website visual preferences by Reinecke & Gajos, which found that older subjects preferred text-heavy websites with many distinct text groups and less saturated colors, while the youngest subjects preferred websites that used saturated colors and larger images. Reportedly, subjects who were older than forty years found visually complex websites 60% more appealing compared to subjects younger than twenty years old; and men favored sites that used primary colors on a white or grey background whereas women preferred websites that used more homogenous color schemes and pastel shades. The study also found differences based on nationality (for example, subjects from Malaysia preferred more colorful websites compared to subjects from Finland and Germany, and subjects from Mexico and Chile favored websites that were twice as complex compared to the preferences of subjects from Russia).)

187. See Ryan M. Calo, *Digital Market Manipulation*, 82 GEO. WASH. L. REV. 995, 1002-03, 1017-18 (2013) (explaining that in a marketplace mediated by technology, firms can leverage user data to personalize every aspect of their transactional interaction with users, such that firms can "surface the specific ways each individual consumer deviates from rational decision-making, however idiosyncratic, and leverage that bias to the firm's advantage."); see also John R. Hauser et al., *Website Morphing*, 28 MKTG. SCI. 202, 202-06 (2009) (describing and testing techniques of "website morphing"—dynamically altering the layout of a test website based on the subject's pre-tested cognitive style).

188. Calo, *supra* note 187, at 1002-03, 1017-18.

both the user's own behavior as gleaned from her "constantly expanding data profile" and in light of "population-wide trends."<sup>189</sup> Personalization can also be driven based on situational data, such as location or movement.<sup>190</sup>

While data-driven personalization may significantly increase the effectiveness of the choice architecture and improve the quality of services, it also involves significant ethical risks, privacy considerations, and normative challenges.<sup>191</sup> For obvious reasons, these concerns are exacerbated in the context of online courts that are committed to values of due process, equality, and neutrality.<sup>192</sup> Thus, while technologically possible, the normative appropriateness and desirability of using personalization of process or outcome in online courts (or any ODR or legal process, for that matter) is debatable and warrants utmost caution. This important debate is beyond the scope of this article. Still, it is important to note that personalizing online courts by dynamically altering visual attributes such as the colorfulness or visual complexity of court interfaces can greatly shape users' choices and experiences. It remains to be seen whether such personalization is perceived less controversial and more applicable compared to the personalization of other court features.

For example, the discussion in subsections (d) and (e) suggests that people with different backgrounds may respond differently to a website's color scheme, level of visual complexity, fonts (type, color, and size) and other visual attributes. Thus, online court designers may consider personalizing such attributes of the interface to better support SRLs or increase their own legitimacy and trustworthiness. One option is to offer users the ability to personalize the visual appearance of the online court interface. Another strategy is to automatically apply such visual personalization based on predetermined attributes.

### *g. Summary and call for action*

Human decision-making can be different in online and offline decision environments, and it can vary across digital devices, such as smartphones and computer screens, and across substantive contexts.<sup>193</sup> Thus, findings and guidelines concerning choice architecture in offline settings do not transfer directly to digital interfaces, and the applicability to online courts of insights regarding digital choice architecture in consumer, educational, or other contexts needs to be tested. This section identified an initial set of UX/UI features that are likely to impact SRLs'

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189. See Karen Yeung, 'Hypernudge': *Big Data as a Mode of Regulation by Design*, 20 INFO., COMM. & SOC'Y 118, 122 (2017).

190. Schneider, Weinmann & vom Brocke, *supra* note 14, at 70.

191. See Kirsten E. Martin, *Ethical Issues in the Big Data Industry*, 14 MIS Q. EXEC. 67 (2015) (discussing risks such as developing algorithmic learned prejudice or disrespectfully objectifying people through their classification into seemingly relevant categories.); Calo, *supra* note 187, at 1049 (pointing out that because personalized nudging on digital platforms is technologically mediated, it raises unique challenges. For example, it is difficult to make it publically known in ways that enable public review.); Yeung, *supra* note 189, at 123-28 (discussing several ethical challenges of "hypernudges" achieved through big-data personalization, and arguing they cannot be overcome through the typical notice and consent mechanisms).

192. Yeung, *supra* note 189, at 122 (description of big data-driven personalized nudges points to some of the aspects that would be inherently challenging in the context of online court nudge personalization, suggesting "they make it possible for automatic enforcement to take place dynamically, with both the standard and its execution being continuously updated and refined within a networked environment that enables real-time data feeds which, crucially, can be used to personalize algorithmic output").

193. BENARTZI & LEHRER, *supra* note 14.

choices and behavior in online courts, and demonstrated their relevance to current online court implementations. The existence of some contradictory observations points to the importance of testing and evaluating relevant issues in the specific context of SRLs in online courts. The next section suggests measures and methodologies to that effect.

Since no choice architecture is neutral—that is, any way a choice is presented will influence how the decision-maker chooses—failure to deliberately design mindful choice environments is problematic in-and-of-itself.<sup>194</sup> Whether purposefully or inadvertently, any online court interface nudges litigants. Its digital choice environment embeds values: its procedural and UX/UI features constrain or encourage certain litigant behaviors and decisions more than others, and may lead to different experiences and outcomes. Thus, in online courts, the digital choice architecture affects the way litigants, and especially SRLs, claim or defend their rights, and the way courts fulfill their functions. To mitigate these risks and improve the ability of online courts to ameliorate access to justice and the administration of justice, digital choice considerations must be incorporated in the design of online courts. It is alarming that little is known about how these mechanisms operate.

#### IV. EVALUATING CHOICE ARCHITECTURE IN ONLINE COURTS

##### *a. Choice architecture as a design consideration*

The design of court procedures embodies a fundamental tension between the goals of justice and efficiency: creating processes that enable accurate, fair and appropriate determinations while minimizing the amount of resources invested in the process,<sup>195</sup> and balancing between other competing values such as predictability, accountability, equality, and responsiveness.<sup>196</sup> In online settings, there are additional design considerations such as usability,<sup>197</sup> user experience,<sup>198</sup> and user satisfaction.<sup>199</sup> As the previous section establishes, this set of design considerations should be broadened to include the impact of the digital choice environment on the nature and quality of SRL's participation. Specifically, online court designers should organize and present information, options, and actions in ways that afford SRLs due process and are consistent with the goals and values of civil courts. It requires designing a choice environment that supports SRLs' informed and deliberate decision-making, promotes their autonomy and self-determination, and minimizes bias.

Given the public function that online courts are entrusted with, their designers should be held to heightened standards of professionalism, accountability and ethicality.<sup>200</sup> The underlying premise is that choice architecture interventions that are

194. Selinger & Whyte, *supra* note 12; Michelle N. Meyer, *Ethical Considerations When Companies Study – and Fail to Study – Their Customers*, in THE CAMBRIDGE HANDBOOK OF CONSUMER PRIVACY 207 (Evan Selinger, Jules Polonetsky & Omer Tene eds., 2018).

195. See Judith Resnik, *The Privatization of Process: Requiem for and Celebration of the Federal Rules of Civil Procedure*, 162 U. PENN. L. REV. 1793 (2014); Coleman, *supra* note 5.

196. Susan S. Silbey, *Making Sense of the Lower Courts*, 6 JUST. SYS. J. 13 (1981).

197. See, e.g., Ginnifer L. Mastarone & Susan Feinberg, *Access to Legal Services: Organizing Better Self-Help Systems*, IEEE INT'L PROF. COMM. CONF. 5 (2007).

198. See, e.g., Hagan, *supra* note 71.

199. See, e.g., CRT Participant Satisfaction Survey, *supra* note 120.

200. See Selinger & Whyte, *supra* note 12; Sunstein, *supra* note 95.



mindfully designed and empirically tested are more effective at reaching their designers' goals and more normatively appropriate compared to choice environments that are designed through trial-and-error. To meet these standards, online court designers should commit to evidence-based planning and evaluation of any digital choice architecture they produce.<sup>201</sup>

This section details an initial set of metrics and methodological strategies that support accurate modeling of the way choice architecture interventions shape SRLs' actions and experiences in online courts. I propose using behavioral and attitudinal measures to capture the effect of specific UX/UI features of online courts on SRLs' choices, inputs, and experiences of procedural justice.

### *b. SRLs' choices, inputs and procedural justice experiences*

It is important to measure the impact of online courts as choice environments on both the behavior and experiences of SRLs. The behavioral impact on SRL's conduct can be measured based on their choices, actions, and inputs in the presence or absence of a specific choice architecture intervention. Examples include the type and quantity of legal information and self-help materials that were accessed on the platform; the type, quantity and relevance of information SRLs provide (e.g. items selected from a menu in formulating a claim or information provided in free text); the number, type and relevance of procedural options SRLs exercise (or waive); the dispute resolution method through which the lawsuit terminated (e.g. direct negotiation, facilitation, adjudication); the type of remedy awarded (e.g. damages, specific performance, apology); the mode of disposition (e.g. settlement, withdrawal, judgment on the merits, default judgment); where settlement was reached, whether it was proposed, accepted or amended by the SRL; the time required to complete each step in the process; the rate and type of procedural errors; and finally, abandonment rates. Many other behavioral measures may be of interest, depending on the context and the specific digital choice feature that is tested. It may also be useful to compare the performance of SRLs and represented litigants on any one of these metrics.

In addition to its behavioral effects, digital choice architecture in courts is likely to affect SRLs' experiences throughout the process. In particular, it is expected to affect their procedural justice experiences. Procedural justice is the most well-established evaluation criterion of dispute resolution processes and justice systems.<sup>202</sup> It encapsulates the idea of fairness in the processes by which decisions are made, and it is commonly understood in terms of the following core components: having an opportunity to effectively participate in the process; a fair and unbiased treatment

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201. In this vein, Amy Schmitz, *supra* note 29, at 163 recently called upon "policymakers from around the world" to "compare notes based on data from pilot projects in order to inform further development of public ODR to advance access to justice." Schmitz points out the importance of combining both quantitative and qualitative research methods to this effect (*id.* at 144-146).

202. See Tom R. Tyler, *What Is Procedural Justice?: Criteria Used by Citizens to Assess the Fairness of Legal Procedures*, 22 L. & SOC'Y REV. 103, 128 (1988); E. Allan Lind et al., *In the Eye of the Beholder: Tort Litigants' Evaluations of Their Experiences in the Civil Justice System*, 24 L. & SOC'Y REV. 953 (1990); Donna Shestowsky, *The Psychology of Procedural Preference: How Litigants Evaluate Legal Procedures Ex Ante*, 99 IOWA L. REV. 637 (2014).

by the decision-maker; treatment with respect and dignity; and availability of information and explanations about the process and its justification.<sup>203</sup> Given their nature, procedural justice experiences are expected to be sensitive to variations in choice architecture.

Improving procedural justice experiences is important because it strongly influences litigants' satisfaction with, evaluation of, preference for, and affect toward dispute resolution systems, including courts.<sup>204</sup> Procedural justice also impacts the evaluation and perceived legitimacy and effectiveness of these institutions,<sup>205</sup> as well as the parties' long-term commitment to the outcomes.<sup>206</sup>

The most straightforward and commonly used method for measuring procedural justice is applicable to SRLs in online courts: answering a questionnaire about their experiences, whether in an experimental setting or in a real-life online court case. An instrument I developed for measuring procedural justice in ODR was successfully used in other settings,<sup>207</sup> and could be adjusted for online courts.

Data on behavioral and attitudinal measures can be collected using multiple methodologies. Online experiments and randomized controlled trials (RCTs) in the field could capture both types of variables. Analysis of data-sets gleaned from online courts (and potentially also other ODR services or online legal services) can be used to compare behavioral measures before and after a recorded choice architecture intervention was employed. Whichever methodology is used, it is important to examine the effects of choice architecture across different demographics, including age and gender, as well as different levels of education, literacy and digital literacy.

### *c. Evaluation Methodologies*

#### *i. Experiments and Randomized Controlled Trials*

An experiment is a useful methodology for studying the effect of digital choice architecture on both SRLs' behavior and their experience, because it allows manipulating the digital environment to measure the influence of specific choice architecture features as independent variables, while holding constant potential confounding factors. At the same time, online experiments, much like lab experiments, involve concerns regarding external validity and realism. Some concerns can be mitigated if the experiments are conducted in an experimental platform which is an identical duplicate of a specific online court, or one that bears close verisimilitude to such an environment.

A related methodological strategy, which is arguably preferable, is to use randomized controlled trials (RCTs), a form of controlled field experiments. RCTs are

203. For a review of procedural justice components, see JOHN THIBAUT & LAURENS WALKER, *PROCEDURAL JUSTICE: A PSYCHOLOGICAL ANALYSIS* (1975); Jason A. Colquitt, *On the Dimensionality of Organizational Justice: A Construct Validation of a Measure*, 86 J. APPLIED PSYCHOL. 386 (2001); Tyler, *supra* note 202; Lind et al., *supra* note 202.

204. THIBAUT & WALKER, *supra* note 203; E. Allan Lind, *The Psychology of Courtroom Procedure*, in *THE PSYCHOLOGY OF THE COURTROOM* 13 (Robert M. Bray & Norbert L. Kerr eds., 1982); Tom R. Tyler, *The Role of Perceived Injustice in Defendants' Evaluations of Their Courtroom Experience*, 18 L. & SOC'Y REV. 51 (1984).

205. Tyler, *supra* note 202, at 111.

206. *Id.* at 108.

207. Sela, *supra* note 29.

a recommended methodology in this context not only because of their methodological advantages, as I detail below, but also because they can be integrated as a scientifically rigorous, policy-oriented, extension of a practices that UX/UI designers already employ: A/B tests. Especially in consumer-facing online platforms, A/B testing is used to examine user reaction to design changes. As one UX designer explains:

A/B testing is a controlled experiment where you compare two or more versions of a page or flow in order to optimize a certain result or metric. You might, for instance, aim to increase the number of sign ups by changing the color of a button in a website. The original page (aka the control or A) will only be seen by part of your website visitors while the page with the modification (aka the variation or B) will be seen by some other part. The user interaction with each page is measured and, after a couple of weeks, the version with the best results wins (which is, in our scenario, the one with the higher number of sign ups).<sup>208</sup>

Randomized Controlled Trials (RCTs) are a scientifically rigorous version of A/B tests. An RCT is an experimental method which was originally developed for medical clinical trials, and has become increasingly popular in social sciences and in law.<sup>209</sup> In legal contexts, RCTs are conducted as field studies in which interventions are applied through a randomized assignment mechanism to actual cases and actors (such as litigants, attorneys and judges).<sup>210</sup> Since RCTs take place in the field and are based on treatment randomization, they are expected to avoid confounding effects and enjoy both internal and external validity.<sup>211</sup>

RCTs could be used to test the effects of different digital nudges (interventions) in online courts by randomly assigning SRLs into a version of the online court interface which either includes a specific UX/UI feature (treatment) or does not include it (control). Subsequently, the behavioral and attitudinal measures of SRLs in each group can be compared. The findings would inform evidence-based design decisions. Since prominent online courts already pilot-test specific process or features with members of the public, before rolling them out more widely,<sup>212</sup> RCTs seem to be a feasible practice that would improve the rigor, learning-potential and reliability of the pilots (with respect to choice architecture or any other element of interest).

Using RCTs in real cases handled by online courts raises ethical concerns, which should be met with a clear set of guidelines. Developing such guidelines is

208. Rodrigo Maués, *Why UX Designers Should Care More About A/B Testing*, MEDIUM (June 26, 2017), <https://medium.com/vivareal-ux-chapter/why-ux-designers-should-care-more-about-a-b-testing-7ef88eace3e9>.

209. D. James Greiner & Andrea Matthews, *Randomized Control Trials in the United States Legal Profession*, 12 ANN. REV. L. & SOC. SCI. 295 (2016).

210. *See id.*

211. *See id.*

212. To the best of my knowledge, such pilots and beta tests do not involve, as of yet, testing digital choice architecture variations. *See e.g.*, Acland-Hood, *supra* note 67 (describing how HMCTS “is using the insight of professionals and partners to develop pilots that are then carefully tested on members of the public . . . [which] allows us to base our systems on what actually works for users before rolling it out more widely”); *Open Public Beta Test – Solution Explorer – Motor Vehicle Accidents*, CIV. RESOL. TRIBUNAL, <https://civilresolutionbc.ca/open-public-beta-test-solution-explorer-motor-vehicle-accidents/> (last visited Apr. 25, 2019).

beyond the scope of this article, but I would like to address a key concern that seems particularly pertinent in courts, which is that CRTs impose unequal treatment of litigants. Meyer notes that “[t]he traditional answer of research ethics to this issue is that randomizing subjects to different arms is ethical if the relevant expert community as a whole is in ‘equipose’ as to which arm, if any, is superior to the other(s).”<sup>213</sup> In other words, generally, where there is no strong ex-ante evidence or agreement among experts that one of the tested choice architectures most advances (or disadvantages) the interests of SRLs, randomization appears ethically less problematic. Another important consideration is that the choice architecture intervention would impose minimal risks on litigants and that litigants would be the ones who stand to benefit from the results.<sup>214</sup> A key advantage of RCTs compared to observational data analyses (as discussed next), is that the former allow for causal inferences about the effects of the tested practice, which some consider a more ethical base for designing choice architecture interventions.<sup>215</sup>

### *ii. Observational data analysis*

Judicial ODR platforms periodically introduce changes to their process design and UX/UI design.<sup>216</sup> Where the timing and nature of the change are recorded and relevant data are retained, an ex-post analysis can be conducted to detect differences in SRLs’ choices and behaviors before and after the change was introduced. It should be emphasized that the feasibility of any ex-post data analysis depends on accurate documentation of changes and on the ability to isolate interventions. Therefore, online courts should retain relevant data, record them in a manner that is conducive for such analyses, and consider rolling out UX/UI changes sequentially.

Arguably, certain features can also be tested using data from other ODR services and online legal services (whether government-operated or private entities such as Legalzoom.com and Rocketlawyer.com).<sup>217</sup> These platforms also take lay users through online process flows for the purpose of resolving a dispute, taking legal action, or creating a legal document in support of legal action such as incorporation, copyright registration, or estate planning. These services have been in operation much longer than online courts, and are therefore likely to have produced more extensive data on digital choice architecture interventions and their potential associated impacts on user behavior. These digital choice environments share many commonalities with online courts, but given their fundamental differences, findings should be interpreted with due caution.

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213. Meyer, *supra* note 194, at 222 n.65. Meyer also discusses the debates concerning the standard of “equipose”. *Id.*

214. *Id.* at 230.

215. *Id.* at 222 n.65.

216. See e.g. *New CRT Online Tools*, [civilresolutionbc.ca/new-crt-online-tools/](http://civilresolutionbc.ca/new-crt-online-tools/) (“after doing some recent testing, we’ve launched a number of new online features, which will make it easier and faster for participants to take steps in the CRT process . . . . As with everything we do in the CRT, we will regularly review how these features are working and what we can do to improve them over time”)

217. For a description of different types of online legal services, including government and court-sponsored information sites, non-profit legal service referral and information sites, private legal information sites, legal services sites and private legal self-help tools, see Hagan, *supra* note 71, at 411-13.

## V. TOWARDS ETHICAL CHOICE ARCHITECTURE IN ONLINE COURTS

Two decades into the twenty-first century, it seems inevitable that courts and other public institutions will adopt more ODR.<sup>218</sup> The challenge ahead is to evaluate and ascertain that they achieve their stated goals and uphold the values of the public justice system, including access to justice,<sup>219</sup> “transparency, integrity, impartiality, fair process, and substantive justice.”<sup>220</sup> This article considers one important aspect of this challenge: the impact of online courts as digital choice environments on the choices, actions, and perceptions of a particularly vulnerable group of users—lay SRLs. Building on research findings in other domains, I present an initial set of digital choice architecture considerations that appear relevant in the context of SRLs in online courts. I explain how they might be used to improve SRLs’ ability to make informed and deliberate decisions, and minimize the risk that online courts introduce bias. Finally, I sketch a preliminary set of measures and methodological strategies for evaluating digital choice architecture in online courts, arguing that such evidence-based design and evaluation is a prerequisite for an ethical online court design.

Next, it is necessary to develop a set of ethical guidelines and professional best practices to govern the *implementation* of targeted digital nudges in online court settings. By now, the idea that ODR systems raise the need “to draft a separate set of standards specific to guide ICT, including its programmers, designers and service providers”<sup>221</sup> seems fairly widely accepted. Drafting guidelines for ethical digital choice architecture is an important aspect of this effort. This hefty task is beyond the scope of this article, but in closing, I would like to offer some remarks in this respect.

The goals of choice architects in commercial settings and in court settings (and for that matter, any ODR setting) are not analogous. In commercial settings, UX/UI designs typically aim to prompt users to make specific choices or actions (commonly, serving the interest of the website by, for example, spending more money, increasing exposure to, and click-rates of, advertisements, or subscribing to a service). In contrast, the goals of choice architects in online courts should be to reduce bias and empower litigants to make informed and deliberate choices that best serve their own interests and promote their self-determination (while minimizing bias and maintaining the courts’ impartiality). Moreover, in public settings such as courts, choice architects are expected to be transparent and to be subjected to public scrutiny.<sup>222</sup>

218. KATSH & RABINOVICH-EINY, *supra* note 2, at 178.

219. In the context of evaluating the OSC in England and Wales, Byrom refers to four measures of access to justice: (1) Access to the formal legal system; (2) Access to an effective hearing; (3) Access to a decision in accordance with substantive law, and (4) Access to remedy. Byrom, *supra* note 30, at 5.

220. Hazel Genn, *Online Courts and the Future of Justice: Birkenhead Lecture 2017* (Oct. 16, 2017), [https://www.ucl.ac.uk/laws/sites/laws/files/birkenhead\\_lecture\\_2017\\_professor\\_dame\\_hazel\\_genn\\_final\\_version.pdf](https://www.ucl.ac.uk/laws/sites/laws/files/birkenhead_lecture_2017_professor_dame_hazel_genn_final_version.pdf). Genn discusses how online courts may affect core values of the justice system and cautions that “while we are debating the ways in which the court system is said to be failing now, it is important . . . to ensure that its core values and characteristics are imported, as far as possible, to the system of the future.” *Id.* at 16.

221. Susan Nauss Exon, *Ethics and Online Dispute Resolution: From Evolution to Revolution*, 32 OHIO ST. J. ON DISP. RESOL. 609, 613 (2017). See also Quek Anderson, *supra* note 171 (discussing ethical standards for court-connected ODR)

222. Sunstein, *supra* note 95, at 428. Sunstein generally argues that “an ethical evaluation must depend on the context and on the roles of the relevant choice architects.” *Id.* at 445.

The realization that digital choice environments are never neutral creates an ethical duty of court designers to commit to evidence-based planning and evaluation of the digital choice environments they design. This commitment should not be regarded a luxury; it ought to be integrated into the core design cycle of online courts (and for that matter, any digital choice environments that supports legal action). This position resonates with the understanding that the ethicality of online platforms' engagement with their users is determined not only by "the risks and expected benefits of studying something, but also [by] the risks and expected benefits of not studying that thing."<sup>223</sup>

It should be further noted that the use of nudges by public institutions raises a host of ethical concerns in-and-of-itself.<sup>224</sup> A common criticism points to the risk of "a failure of respect, a failure to recognize the authority that persons have to demand, within certain limits, that they be allowed to make their own choices for themselves."<sup>225</sup> In his defense of the ethicality of nudging, Cass Sunstein suggests that for some types of nudges, "the ethical objections are greatly weakened and might well dissipate."<sup>226</sup> In this category, he lists nudges that "have the goal of increasing navigability—of making it easier for people to get to their preferred destination" as well as "educative nudges... [aimed at] increasing people's own powers of agency."<sup>227</sup> In addition, Sunstein argues that nudges that aim "to target, or to benefit from, behavioral biases tend to be more controversial, on ethical grounds, than efforts to appeal to deliberative capacities."<sup>228</sup>

The review in Section III points to some of the surprising effects of *digital* choice environments. It suggests that even if we accept Sunstein's position—and there are certainly critics who do not accept it—we must examine our assumptions about what promotes online users' ability to process information, deliberate, and make choices that serve their interests (or stated preferences). One illustration of this point appears in my review in subsection (d) of the mixed evidence about display induced nudges. I point to the possibility that there are potentially counterintuitive effects that need to be tested. One example is the notion that promoting the quality of SRLs' participation in online courts, as measured by informed and deliberate decision making and procedural justice experiences, might require making online court interfaces less streamlined. In other words, designing online courts with "user-friendly" guided procedures that SRLs can complete too effortlessly runs the risk of undermining access to justice, procedural justice, litigants' self-determination, and core values of the judicial system.

It is important to develop guidelines for ethical digital nudging in online courts, based on evidence about their actual operation. This article closes some of this knowledge gap, and it is my hope that it sets the course for a rigorous and shortly-coming empirical realization of this endeavor.

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223. Meyer, *supra* note 194, at 228.

224. For a useful review of ethical objections to nudges, see Sunstein, *supra* note 95.

225. Stephen Darwall, *The Value of Autonomy and Autonomy of the Will*, 116 *ETHICS* 263, 268 (2006).

226. Sunstein, *supra* note 95, at 426.

227. *Id.* at 426-27.

228. *Id.* at 427-28.