

STREAMLINING JUSTICE: HOW ONLINE COURTS CAN RESOLVE THE CHALLENGES OF PRO SE LITIGATION

*Ayelet Sela**

The tide of pro se litigation in the American justice system imposes significant constraints on self-represented litigants' (SRLs) access to justice and courts' ability to administer justice. Mitigating the challenges requires a systemic institutional and procedural reform. Advancing this approach, the Article proposes that online courts would alleviate many of the challenges associated with pro se litigation, and puts this proposition to an empirical test. To that end, the Article analyzes the challenges experienced by SRLs and courts and models the procedural and technological properties that would promote SRLs' "day in court" as well as courts' provision of fair and efficient access to justice. Based on the analysis and on a review of successful implementations of judicial online dispute resolution (JODR) systems, the Article proposes a detailed policy design framework for a JODR system for pro se litigation. Finally, the Article reports and discusses the results of an experiment evaluating the effect of the proposed framework on SRLs' procedural justice experiences.

INTRODUCTION	332
I. SELF-REPRESENTATION IN JUDICIAL PROCESSES	334
A. <i>The Realities of Pro Se Litigation</i>	334
B. <i>Current Policies and Countermeasures</i>	340
II. CONDUCTING JUDICIAL PROCESSES ONLINE	342
A. <i>Remote Participation in Judicial Proceedings</i>	342
B. <i>JODR State of the Art</i>	344
1. <i>From ODR to JODR</i>	344
2. <i>JODR State of the Art and Current Implementations</i>	346
III. ALLEVIATING CHALLENGES OF PRO SE LITIGATION WITH JODR	352
A. <i>Modeling the Challenges of Pro Se Litigation and Technology</i>	352

* Post-doctoral fellow, Faculty of Law, Bar Ilan University. I wish to thank Deborah Hensler, Mark Kelman, Janet Martinez, and the late Clifford Nass for their insightful comments on earlier drafts.

B. A Framework for JODR Systems for Pro Se Litigation 353

1. General Framework 354
2. Availability, Time, Cost, Infrastructure 356
3. Automated Real-Time Legal Aid: Reducing Errors and Judicial Bias 356
4. Judicial Docket Management and Case Processing 358
5. Process Dynamics and Effectiveness: SRLs’ Meaningful Participation 359
6. Implications for Choosing a Medium of Communication 361

IV. THE EFFECT OF JODR ON PROCEDURAL JUSTICE EXPERIENCES 362

- A. Experiment Design and Procedure* 363
 1. Overview 363
 2. Independent Variables 364
 3. Dependent Variables 364
 4. Developing Hypotheses 370
 5. Experimental Procedure 373
- B. Results and Analysis* 375
 1. Principal Findings 375
 2. Analysis and Findings 376

V. DISCUSSION AND CONCLUSIONS 380

- A. Discussion and Implications of the Results* 380
- B. Qualifications and Additional Remarks* 384
- C. Final Remarks* 386

APPENDIX: COMPOSITE MEASURE FACTOR ANALYSIS 387

“If any thought or effort is put into combining technology with the needs of pro se courts and litigants, something truly revolutionary might emerge.”¹

INTRODUCTION

Ever-changing social, economic, political and technological realities prompt justice systems to employ new approaches and mechanisms for resolving disputes and delivering justice.² This Article lies at the intersection of two prominent trends in the American justice system: growing

¹ Benjamin H. Barton, *Against Civil Gideon (and for Pro Se Court Reform)*, 62 FLA. L. REV. 1227, 1273 (2010).

² See Bruce Tonn et al., *Future of the Courts: Fixed, Flexible, and Improvisational Frameworks*, 44 FUTURES 802, 802 (2012).

rates of legal self-representation (including “pro se” litigation)³ and growing reliance on technology to improve access to justice.⁴ To date, the use of online technology to support legal self-representation has been confined primarily to the provision of educational and informational materials, such as “how-to” websites and downloadable legal forms, available mostly in the pre-filing stage. This Article argues that technology can do much more to alleviate the challenges associated with pro se litigation. It proposes a detailed framework for instituting “online courts”: judicial online dispute resolution (JODR) systems that improve the ability of self-represented litigants (SRLs) to effectively participate in proceedings, as well as the ability of courts to administer them fairly and efficiently. The Article puts its proposition to an empirical test, reporting the results of a study on the effect of four alternative JODR system designs on SRLs’ procedural justice experiences.

SRLs handle all procedural and substantive aspects of their legal matters, including court appearances, without representation by counsel. Laypeople who self-represent in judicial processes typically lack knowledge of legal procedure and substance, an inherent limitation which is consistently found to impede their access to justice and the legal system’s ability to deliver justice. Various measures have been employed to mitigate the problems associated with legal self-representation, ranging from supporting the ability of SRLs to self-represent (for example, by making legal information more available), to providing them with representation through legal aid or pro bono programs. However, the steadily growing number of SRLs and the continuously shrinking funding of legal aid programs render traditional courses of action insufficient.

JODR systems are a viable and appropriate “demand side” systemic response to the challenging realities of pro se litigation. Online dispute resolution (ODR) technologies and process designs have been honed and vetted for almost twenty years in both private and public settings. They are an economic and effective means to positively impact a large constituency, introduce institutional efficiencies and improve the accessibility of services.⁵ Moreover, evidence suggests that JODR processes can im-

³ The term “pro se” means on behalf of one’s self. On the growth of pro se litigations, see Stephan Landsman, *The Growing Challenge of Pro Se Litigation*, 13 LEWIS & CLARK L. REV. 439, 440 (2009) (“America’s courts appear to be facing an inexorably rising tide of pro se litigation.”); see also CONF. OF ST. CT. ADMINS., POSITION PAPER ON SELF-REPRESENTED LITIG. 1 (Aug. 2000), <http://cosca.ncsc.org/~media/Microsites/Files/COSCA/Policy%20Papers/selfreplitigation.ashx> (describing a “surge in self-represented litigation . . . [that] shows no sign of abating”).

⁴ See James E. Cabral et al., *Using Technology to Enhance Access to Justice*, 26 HARV. J.L. & TECH. 241 (2012).

⁵ See Ayelet Sela, *The Effect of Technology on Dispute Resolution System Design: Antecedents, Current Trends and Future Directions*, LEWIS & CLARK L. REV. (forthcoming 2017).

prove the *quality* of SRLs' experiences in terms of due process and fairness. Indeed, judicial bodies in several jurisdictions have begun experimenting with JODR systems.⁶

This Article puts forth a model for a JODR system for pro se litigation, and reports the findings of a study testing its effect on SRLs' procedural justice experiences. Part I describes the realities of pro se litigation in the United States; the unique characteristics and challenges associated with it from the perspective of both SRLs and courts and the measures employed to address them. Part II introduces the field of ODR and reviews key JODR implementations. Part III proposes a framework for a JODR system for pro se litigation, focusing on non-prisoner civil and administrative proceedings between government agencies and self-represented individuals—whether in court or administrative trial-like hearings.⁷ Part IV reports the results of an experiment comparing the effect of JODR system designs that are based on online text and video communication on SRLs' experience of procedural justice. Part V concludes the Article, discussing implications and directions for future research.

I. SELF-REPRESENTATION IN JUDICIAL PROCESSES

A. *The Realities of Pro Se Litigation*

The right of civil litigants to self-representation is a long-recognized right by Congress as well as the majority of states.⁸ Although data about the volume of legal self-representation, the characteristics of SRLs, and

⁶ See *infra* Section II(B).

⁷ Administrative hearings that are conducted by an administrative law judge (ALJ) are comparable to bench trials. They are typically used to resolve disputes between a government agency and someone affected by a decision it made. The role of an ALJ is “functionally comparable” to that of a judge He may issue subpoenas, rule on proffers of evidence, regulate the course of the hearing, and make or recommend decisions . . . exercis[ing] his independent judgment.” *Butz v. Economou*, 438 U.S. 478, 512 (1978). Similar to court judges, ALJs serve as initial triers of fact and decision makers. See 5 U.S.C. § 556 (2012) (defining the authorities of ALJs); Ronnie A. Yoder, *The Role of the Administrative Law Judge*, 22 J. NAT'L ASS'N ADMIN. L. JUDGES 321, 324 (2002). As of August 2016, 34 federal agencies and 37 state agencies employ ALJs. ASS'N OF ADMIN. L. JUDGES, *Agencies Employing Administrative Law Judges*, <http://www.aalj.org/agencies-employingDesktop-administrative-law-judges>. By focusing on judicial processes involving the State, the discussion circumvents the question of whether an ODR system appropriately balances the rights and needs of SRLs and those of their opposing (possibly represented) parties, by assuming that the government, as a citizen-facing repeat-player, significantly benefits from conducting the processes using an ODR system.

⁸ Congress first recognized the right to self-representation in the Judiciary Act of 1789, 1 Stat. 73. Federal civil litigants' right to self-representation is codified in 28 U.S.C. § 1654 (2012). The majority of states have established the right to proceed pro se in their constitutions (either explicitly or by interpreting a general right to redress or to be heard) or by statute. For further information, see Nina Ingwer Van Wormer, Comment, *Help at Your Fingertips: A Twenty-First Century Response to the Pro Se Phenomenon*, 60 VAND. L. REV. 983, 987–88 (2007).

trends in the field are fragmented and scant,⁹ they generally show a continuously increasing volume of pro se litigation in administrative hearings as well as civil procedures in federal and state courts.¹⁰ In certain case types, the majority of cases involve at least one SRL,¹¹ with non-prisoner pro se litigation rates as high as 75% in state courts,¹² and 20% in federal courts.¹³ Empirical studies conducted in individual jurisdictions suggest that commonly self-litigated case types include civil rights actions, family law matters, employment discrimination cases, and labor, social security, home foreclosure, housing, and landlord-tenant dis-

⁹ Stephan Landsman, *Pro Se Litigation*, 8 ANN. REV. L. & SOCIAL SCI. 231, 238–39 (2012) (“[W]e know very little about how many self-represented litigants there are, who they are, why they choose to represent themselves, and how their presence affects the operation of the civil justice system.”); Landsman, *supra* note 3, at 440 (pointing to the lack of national statistics about pro se litigation).

¹⁰ Van Wormer, *supra* note 8, at 988–91.

¹¹ See Rebecca L. Sandefur, *The Impact of Counsel: An Analysis of Empirical Evidence*, 9 SEATTLE J. SOC. JUST. 51, 60 (2010); see also John M. Greacen, *Self Represented Litigants and Court and Legal Services Responses to Their Needs: What We Know*, CAL. ADMIN. OFF. CTS. at 6–7 (2003), <http://www.courts.ca.gov/partners/documents/SRLwhatweknow.pdf> (describing a study by the state of California documenting self-representation rates).

¹² See Madelynn Herman, *Pro Se Statistics*, NAT’L CTR. FOR ST. CTS. (2006), https://nacmnet.org/sites/default/files/04Greacen_ProSeStatisticsSummary.pdf (providing a compilation of statistics prepared for the National Association for Court Management showing pro se litigation rates ranging from approximately 30% to over 75% in different state courts); Landsman, *supra* note 9, at 239 (suggesting that by the early 1990s nationwide pro se litigation rates reached approximately 70% of domestic relations cases, small claims proceedings, housing courts cases, and actions related to debt). The “data viewer” of the Court Statistics Project provides data on civil cases involving SRLs for a limited number of state courts. See *CSP Civil*, NAT’L CTR. FOR STATE COURTS, http://www.ncsc.org/Sitecore/Content/Microsites/PopUp/Home/CSP/CSP_Civil (last visited Feb. 1, 2017).

¹³ Van Wormer, *supra* note 8, at 989 & nn.30–31, presents a year-by-year analysis of reports by the Federal Judiciary showing that between 1997 and 2004, non-prisoner pro se litigants accounted for approximately 13% to 14% of all civil federal appeals filed annually. Landsman analyzes data from the Administrative Office of the United States Courts showing that in 2006 and 2007 non-prisoner pro se filings constituted roughly 20% of all appeals filed in the courts of appeals. Landsman, *supra* note 3, at 443. Unfortunately, there is no systematic documentation of civil pro se litigation rates in the federal district courts. See Jonathan D. Rosenbloom, *Exploring Methods to Improve Management and Fairness in Pro Se Cases: A Study of the Pro Se Docket in the Southern District of New York*, 30 FORDHAM URB. L.J. 305, 315 & n.47 (2002). However, similar rates have been found in several district courts that were studied. See, e.g., David Rauma & Charles P. Sutelan, *Analysis of Pro Se Case Filings in Ten U.S. District Courts Yields New Information*, FJC DIRECTIONS 5–6 (June 1996); Timothy D. Thompson, *Non-Prisoner Pro Se Litigation in the United States District Court for the Eastern District of Kentucky: Analyzing 2004 and 2007 Cases from Filing to Termination*, 99 KY. L.J. 601, 613–25 (2011).

putes.¹⁴ They also indicate that most SRLs are plaintiffs¹⁵ and that the government is a common party to pro se proceedings.¹⁶

A host of economic, psychological, and social factors explain the rise in legal self-representation in America. These factors include the rising cost of legal services and a parallel decrease in public funding for civil legal aid programs; the increasing availability and accessibility of myriad legal resources such as statutory and case law (in print and online), legal forms, and “how-to” guides; as well as litigants’ mistrust in the legal system and lawyers, and their sense that procedures can be tackled without lawyers¹⁷—a belief fostered by rising literacy rates, ideas of consumerism and individualism, and inspiration from dramatic and reality legal television shows.¹⁸

Nonetheless, in a legal system designed under the assumption that litigants would be represented by lawyers, SRLs often find it difficult to navigate the intricacies of the system and fully participate in its procedures.¹⁹ Two tightly-related root causes generate the difficulties that SRLs experience. First, SRLs often lack the knowledge required to understand and apply the procedural and substantive laws that govern the

¹⁴ See Spencer G. Park, Note, Providing Equal Access to Equal Justice: *A Statistical Study of Non-Prisoner Pro Se Litigation in the United States District Court for the Northern District of California in San Francisco*, 48 HASTINGS L.J. 821, 832–33 (1997); accord Landsman, *supra* note 9, at 239; Rosenbloom, *supra* note 13, at 321; Thompson, *supra* note 13; ABA COAL. FOR JUSTICE, REPORT ON THE SURVEY OF JUDGES ON THE IMPACT OF THE ECONOMIC DOWNTURN ON REPRESENTATION IN THE COURTS 10 tbl.1 (July 2010), http://www.americanbar.org/content/dam/aba/publishing/abanews/1279030087coalition_for_justice_report_on_survey.authcheckdam.pdf.

¹⁵ See, e.g., Park, *supra* note 14, at 823.

¹⁶ See, e.g., Rosenbloom, *supra* note 13, at 323; Park, *supra* note 14, at 830.

¹⁷ Some argue that there are litigants who are able to afford counsel but choose to self-represent “as a self-affirming experience that many litigants might select precisely because of the personal empowerment that arises from maintaining control over the elements of their case.” Scott Barclay, *The Decision to Self-Represent*, 77 SOC. SCI. Q. 912, 913 (1996); see also Nourit Zimmerman & Tom R. Tyler, *Between Access to Counsel and Access to Justice: A Psychological Perspective*, 37 FORDHAM URB. L.J. 473, 498–501 (2010) (discussing critically the idea of “self-representation as an empowering tool” and some empirical evidence supporting it).

¹⁸ For further discussion of the causes for the rise in legal self-representation, see Landsman, *supra* note 3, at 443–46; Van Wormer, *supra* note 8, at 991–92; CONFERENCE OF CHIEF JUSTICES & CONFERENCE OF STATE COURT ADM’RS, FINAL REPORT OF THE JOINT TASK FORCE ON PRO SE LITIGATION 3 (July 2002) [hereinafter JOINT TASK FORCE REPORT], [http://ccj.ncsc.org/~media/Microsites/Files/CCJ/Web%20 Documents/TaskForceReportJuly2002.ashx](http://ccj.ncsc.org/~media/Microsites/Files/CCJ/Web%20Documents/TaskForceReportJuly2002.ashx).

¹⁹ See Zimmerman & Tyler, *supra* note 17, at 476–77 (“The American legal system relies heavily on the representation of litigants by lawyers in court procedures. . . . At the heart of its procedures, it posits the lawyer, a professional trained to bring her client’s voice and interests before the court. . . [W]hen the procedural design assumes representation, the ability of individuals to actually proceed successfully without an attorney, or to directly participate when they do have an attorney, diminishes.” (citation omitted)).

consideration of their claims.²⁰ Thus, they typically have difficulty in applying legal concepts, determining the relevance of facts, and meeting the requisite burden of proof. As a result, they often fail to effectively articulate their position to the court.²¹ Studies show that well over half of the cases involving an SRL are dismissed *sua sponte* on the court's motion or upon a motion to dismiss filed by the opposing party, most commonly due to failure to state a claim.²² SRLs who manage to advance further in the process tend to fare worse than represented parties.²³

The second, closely related root cause of the challenges experienced by SRLs is the incompatibility and inadaptability of the structural characteristics of the adversarial system to self-representation by laypeople and, especially, “the clash between the conventions for talking about troubles in noninstitutional settings and the law’s conventions for speech within

²⁰ See Paris R. Baldacci, *Assuring Access to Justice: The Role of the Judge in Assisting Pro Se Litigants in Litigating Their Cases in New York City’s Housing Court*, 3 *CARDOZO PUB. L. POL’Y & ETHICS J.* 659, 661 (2006) (“[A] *pro se* litigant is thrust into the role of litigator within an adversarial system which she does not understand, either procedurally or substantively”); Rosenbloom, *supra* note 13, at 306–07; Jessica K. Steinberg, *Demand Side Reform in the Poor People’s Court*, 47 *CONN. L. REV.* 741, 795 (2015) (“[N]early every aspect of the adjudicatory process in state court civil proceedings is impenetrable to a layperson, resulting in frequent operator errors with devastating consequences.”); Alicia M. Farley, Note, *An Important Piece of the Bundle: How Limited Appearances Can Provide an Ethically Sound Way to Increase Access to Justice for Pro Se Litigants*, 20 *GEO. J. LEGAL ETHICS* 563, 569 (2007); Park, *supra* note 14, at 821; Van Wormer, *supra* note 8, at 993.

²¹ The most common responses of judges to a survey about the negative impacts of self-representation included “failure to present necessary evidence . . . procedural errors . . . [i]neffective witness examination . . . failure to properly object to evidence . . . [and] ineffective arguments.” ABA COAL. FOR JUSTICE, *supra* note 14, at 4; see also Park, *supra* note 14, at 821; BOS. BAR ASS’N, REPORT ON PRO SE LITIGATION 47–48 (1998), <http://www.bostonbar.org/prs/reports/unrepresented0898.pdf>. Although in 1972 the Supreme Court asserted that *pro se* pleadings are to be held “to less stringent standards than formal pleadings drafted by lawyers,” *Haines v. Kerner*, 404 U.S. 519, 520–21 (1972), outside the pleading stage, lower courts exercise discretion and are split as to whether this procedural relaxation should be expanded to other aspects of *pro se* actions. See Edward M. Holt, *How to Treat “Fools”: Exploring the Duties Owed to Pro Se Litigants in Civil Cases*, 25 *J. LEGAL PROF.* 167 (2001); Rory K. Schneider, *Illiberal Construction of Pro Se Pleadings*, 159 *U. PA. L. REV.* 585 (2011).

²² See, e.g., Rosenbloom, *supra* note 13, at 335–37, 341–43; Thompson, *supra* note 13, at 602; Park, *supra* note 14, at 835, 847 (proposing that the high dismissal rate of SRLs’ claims may be the result of either their bringing meritless claims or their difficulty following procedural rules).

²³ See Sandefur, *supra* note 11, at 51–52 (providing a meta-analysis of twelve studies, comparing similarly situated litigants and finding that “[w]hen people are represented by attorneys, they are, on average, more likely to win in adjudication than are people who are unrepresented”); *id.* at 69–70 (noting that the size of the advantage varied from as little as 19% to as much as a factor of 14); *id.* at 71–74 (noting that the difference between SRLs and lawyers increases as procedural complexity rises). However, both Sandefur and Landsman, *supra* note 9, at 241, contend that few studies have been able to effectively isolate the effect of representation by counsel. Nonetheless, in an ABA survey of judges, 62% of respondents indicated that the outcomes of *pro se* litigants in civil courts were worse than those of represented parties. See ABA COAL. FOR JUSTICE, *supra* note 14, at 3.

legal institutions.”²⁴ Specifically, SLRs often fail to conform to the expected formal strictures of a rule-oriented account; rather, they tend to provide relation-oriented narratives that are common in everyday speech. Studies conducted in different courts show that even when SRLs have an understanding of claims and defenses (having received some advice or assistance from lawyers, for example) the typical dynamic of the judicial process leads to their systematic silencing.²⁵ As one study observed:

[N]arrative is viewed [by courts] as being an uneconomic, rambling mode of communication, and as an inappropriate means for raising or demonstrating cognizable legal claims on which legal relief may be given. Thus, the pro se litigant is continuously interrupted during that narrative either by the attorney’s objecting “She’s testifying in a narrative,” or by the court’s insisting that much of the narrative is “irrelevant” and, thus, cannot be dealt with in the context of the present case, motion, or hearing.²⁶

Data on the perspective of judges confirm that this dynamic is a two-way problem. Judges report that SRLs tend to present “ineffective

²⁴ Baldacci, *supra* note 20; Barbara Bezdek, *Silence in the Court: Participation and Subordination of Poor Tenants’ Voices in Legal Process*, 20 HOFSTRA L. REV. 533, 586–88 (1992) (“[T]he rule-oriented court talk expected and privileged by judges in low-level courts bears little or no relation to people’s natural narratives . . . [r]ules of evidence disallow the ordinary discourse rules used when people talk as they ordinarily do.”); *see also* O’Barr & Conley, *supra* note 25; Zimmerman & Tyler, *supra* note 17, at 497 (“Pro se litigants need to deal with a language they do not always understand, evidentiary constraints and procedural protocols. Such rules are not always in sync with people’s common sense and social instincts, which are based on their behavior and interactions outside the legal sphere.”); Steinberg, *supra* note 20, at 754 (“Litigants who proceed pro se must navigate complex, and often counter-intuitive, procedures to prosecute or defend a legal matter . . . [L]itigants must, among other things, articulate cognizable claims or defenses, complete pleadings in the proper format, serve the opposing party, prepare a proof of service, [] file all proper documents with the court clerk . . . schedule the proper hearings, interpret court notices, handle motions, propound and respond to discovery requests, and manage settlement talks—often with an opponent’s attorney. The pro se litigant who makes it to trial must contend with the rules of evidence, examine and cross-examine witnesses, and maintain proper courtroom demeanor.”).

²⁵ *See, e.g.*, Bezdek, *supra* note 24 (in the context of the Baltimore’s Rent Court); Russell Engler, *And Justice for All – Including the Unrepresented Poor: Revisiting the Roles of Judges, Mediators, and Clerks*, 67 FORDHAM L. REV. 1987, 2047–69 (1999) (in the context of Family and Bankruptcy courts, and in Boston and New York City housing courts); Baldacci, *supra* note 20, at 661 (in the context of the New York City Housing Court, arguing that “the structural dynamics in Housing Court . . . work to silence the pro se litigant even when she has some knowledge regarding defenses or claims.”); O’Barr & Conley, *supra* note 24 (describing two studies of small claims court hearings, suggesting that self-represented litigants tend to provide relation-oriented narratives and have difficulty providing legally adequate (rule-oriented) accounts, while courts tend to treat relational accounts dismissively and regard their content as irrelevant or inappropriate).

²⁶ Baldacci, *supra* note 20, at 664.

arguments”²⁷ and that they themselves experience communication barriers with SRLs that are detrimental to their efforts to describe legal issues and processes to SRLs.²⁸ This dynamic disadvantages SRLs and frustrates their ability to fully participate in judicial processes.²⁹ It is therefore not surprising that SRLs often report they are confused, overwhelmed, scared, frustrated, and bitter with the judicial process.³⁰ Notably, this dynamic is also observed in relatively informal settings such as small claims courts, seemingly non-adversarial settings such as administrative hearings, and even when SRLs’ adversary is not present or represented, such as in social security disability hearings.³¹ To summarize, simply allowing SRLs to participate in judicial processes does not guarantee their access to justice and due process; to have their day in court SRLs require a forum in which they can effectively present their claims and be heard.

The influx of self-representation also significantly affects the ability of judicial bodies to administer justice. Pro se litigation often results in delays and procedural complications that are detrimental to judicial efficiency. SRLs are prone to committing administrative, procedural and substantive errors that add to the burden on courts, placing demands on court personnel and resources, delaying the progress of cases and the clearing of dockets, and increasing administrative costs.³² As mentioned earlier, judges report they experience difficulties in communicating with SRLs, describing legal issues and processes in a manner accessible to them, and maintaining control over their compliance with court rules.³³ The ability of court clerks and judges to assist SRLs in receiving meaningful access to justice is further complicated by the restrictions most

²⁷ ABA COAL. FOR JUSTICE, *supra* note 14, at 4; *see also supra* note 21 (describing a range of associated problems).

²⁸ Rosenbloom, *supra* note 13, at 307.

²⁹ *See* Paris R. Baldacci, *A Full and Fair Hearing: The Role of the ALJ in Assisting the Pro Se Litigant*, 27(2) J. NAT’L ASS’N ADMIN. L.J. 447, 448 (2007); Bezdek, *supra* note 24, at 536; O’Barr & Conley, *supra* note 24, at 667; Zimmerman & Tyler, *supra* note 17, at 499–501.

³⁰ *See, e.g.,* Jona Goldschmidt et al., MEETING THE CHALLENGE OF PRO SE LITIGATION: A REPORT AND GUIDEBOOK FOR JUDGES AND COURT MANAGERS 53 (1998); BOS. BAR ASS’N, *supra* note 21, at 28; Rosenbloom, *supra* note 13, at 305–07.

³¹ Baldacci, *supra* note 29, at 449, 452.

³² Examples include failure to submit documents on time (resulting in additional paper work and postage costs to courts); failure to arrange for service for process on opposing party and failure to appear for scheduled hearings (both of which require scheduling adjustments to court calendars, creating inefficiencies in the use of court time and unnecessary delays in other cases); submission of incomplete or indecipherable court documents (making it difficult for judges to determine whether the claim has a legally cognizable basis the requested relief). *See also* JOINT TASK FORCE REPORT, *supra* note 18, at 4.

³³ Rosenbloom, *supra* note 13, at 307; *see also* ADMINISTRATIVE OFFICE OF THE COURTS—CENTER FOR FAMILIES, CHILDREN AND THE COURTS, HANDLING CASES INVOLVING SELF-REPRESENTED LITIGANTS: A BENCHGUIDE FOR JUDICIAL OFFICERS 1-3-1-4 (2007), http://www.courts.ca.gov/documents/benchguide_self_rep_litigants.pdf.

jurisdictions impose on court personnel's interaction with SRLs, which permit only the provision of legal *information*, and prohibit the granting of legal *advice*.³⁴ Thus, judges struggle with an ethical dilemma as they strive to promote SRLs' effective access to justice without jeopardizing their own judicial impartiality.³⁵

B. Current Policies and Countermeasures

In an effort to respond to the needs of SRLs on the one hand, and ease the operational burden on courts and agencies conducting administrative hearings on the other, a host of strategies and measures have been devised.³⁶ Pro se offices and self-help centers have been set up, offering access to brochures on substantive areas of the law, self-help books and videos, simple language instructions and forms for filing. Many of them also include public workshops and one-on-one assistance from court staff or specially trained paralegal volunteers. In-person legal aid efforts also included boosting pro bono attorney services, collaborative programs with legal aid agencies and community organizations, and instituting programs and court rules intended to encourage the private bar to increase the availability of lower-priced "unbundled" legal services.³⁷ In recent years, internet-based resources have become a popular means for improving the delivery of legal information to SRLs. Many courts offer online self-help centers, which include detailed legal information and in-

³⁴ See John Gracean, 'No Legal Advice from Court Personnel': What Does That Mean?, 34 JUDGES' J. 10, 10 (1995); Rosenbloom, *supra* note 13, at 308 & n. 11 (reviewing relevant case law); Van Wormer, *supra* note 8, at 994 (noting that the line between legal advice and legal information "can be a hazy one, and [that] it may vary by jurisdiction").

³⁵ See, e.g., BOS. BAR ASS'N, *supra* note 21, at 52; JOINT TASK FORCE REPORT, *supra* note 18, at 4; Holt, *supra* note 21, at 168 (noting that the Supreme Court has never "directly addressed the question of whether courts owe pro se civil litigants a duty to assist them throughout the entire trial process"); Richard Zorza, *The Disconnect Between the Requirements of Judicial Neutrality and Those of the Appearance of Neutrality When Parties Appear Pro Se: Causes, Solutions, Recommendations, and Implications*, 17 GEO. J. LEGAL ETHICS 423, 426 (2004). Administrative law judges face similar challenges. See James F. Horan, *Dealing With Pro Se and Non-Attorney Litigants In New York Administrative Hearings*, N.Y. ST. ADMIN. L. JUDGES ASS'N 1-2 (2011), <http://www.nysalja.org/wp-content/uploads/2011/03/Dealing-With-Pro.pdf>.

³⁶ See JOINT TASK FORCE REPORT, *supra* note 18, at 1-2; JUDICIAL COUNCIL OF CAL., FACT SHEET: PROGRAMS FOR SELF-REPRESENTED LITIGANTS 1-5 (2014), <http://www.courts.ca.gov/documents/proper.pdf>. In the context of administrative hearings, see generally ARIZ. CTR. FOR DISABILITY LAW, HOW TO REPRESENT YOURSELF AT AN ADMINISTRATIVE HEARING: A SELF-ADVOCACY GUIDE (2001), <http://www.acdl.com/New%20Logo%20Guides/H5PL%20New%20Logo.pdf>.

³⁷ For a description of unbundled legal services, see STEPHANIE L. KIMBRO, LIMITED SCOPE LEGAL SERVICES: UNBUNDLING AND THE SELF-HELP CLIENT (2012).

structions on court procedures, downloadable court forms with explanations on how to complete them, and links to external help resources.³⁸

Despite the abundance of well-intentioned measures, the justice system is still far from responding to the challenges of legal self-representation. Many critics believe that “the best solution to the issues raised by pro se litigation is to obtain legal counsel.”³⁹ However, legal representation remains largely inaccessible to many litigants, especially ones of low income.⁴⁰ Severe funding constraints and a growing volume of seemingly eligible classes of pro se litigants complicate legal-aid allocation decisions and the expansion of access to counsel initiatives.⁴¹

This reality has prompted claims for a “demand side reform”⁴² of the legal system: introducing changes to the court system to ensure it is fair and efficient to SRLs.⁴³ Specifically, there are calls for the legal system to “develop procedures and techniques that are tailored to SRLs’ abilities to tell their stories in a way that will reveal whether those stories are legally sufficient to support their claims or defenses.”⁴⁴

This Article argues that appropriately designed JODR systems would be an important and effective demand side solution for the challenges of pro se litigation. Focusing on civil and administrative disputes between SRLs and governmental agencies in courts and administrative hearings, it proposes a framework for a JODR system that services its users through pre-filing, filing, initial judicial review, consideration of

³⁸ See, e.g., SELF SERV. CTR. OF THE SUPERIOR COURT IN MARICOPA CNTY., ARIZ. (highly acclaimed online), <https://www.superiorcourt.maricopa.gov/SuperiorCourt/Self-ServiceCenter/>; see also JOINT TASK FORCE REPORT, *supra* note 18, at 8.

³⁹ Rosenbloom, *supra* note 13, at 311; see also Farley, *supra* note 20, at 569 (proposing limited appearances as a mechanism to ensure at least some legal representation for pro se litigants).

⁴⁰ Alicia M. Farley, *An Important Piece of the Bundle: How Limited Appearances Can Provide an Ethically Sound Way to Increase Access to Justice for Pro Se Litigants*, 20 GEO. J. LEGAL ETHICS 563, 566 (2007) (“Traditional full-service representation is largely inaccessible to low-income individuals . . .”); Rosenbloom, *supra* note 13, at 363 (“Securing legal counsel for pro se litigants has been hampered by monetary constraints, lack of court initiatives, and a failure of the bar to structure a system where legal representation is always an option.”); Landsman, *supra* note 9, at 239 (“The larger the pro se population, the less likely the most costly intervention—the provision of counsel—will be utilized.”).

⁴¹ See Steinberg, *supra* note 20, at 745.

⁴² *Id.* at 746 (calling for a “demand side reform . . . an overhaul of the processes and rules that govern litigation so that they best serve the interests of . . . the unrepresented”).

⁴³ Farley, *supra* note 20, at 566 (“[M]eeting the needs of the growing pro se population requires changes to the court system to ensure that justice is fair and efficient to all litigants.”); see also Barton, *supra* note 1; Richard W. Painter, *Pro Se Litigation in Times of Financial Hardship - A Legal Crisis and Its Solutions*, 45 FAM. L.Q. 45, 62 (2011).

⁴⁴ Baldacci, *supra* note 29, at 457; see also Zimmerman & Tyler, *supra* note 17; Bezdek, *supra* note 25 and accompanying text; Steinberg, *supra* note 20, at 746 (“Effective demand side reform would revise the procedural and evidentiary rules . . . [to enable] meaningful participation in the court system by those who appear without counsel . . . [and] bring the operation of the legal system into alignment with the capabilities of the litigants who use it.”).

ADR options, discovery, judicial intervention, and determination. From SRLs' perspective, a JODR system can improve their ability to navigate the justice system, meaningfully participate in proceedings, experience procedural justice, and have their day in court. From the perspective of judicial bodies, a JODR system can improve the administration of justice by providing an effective, economically feasible, ethical, and responsible means for handling the growing rates of pro se litigation.⁴⁵ The model posits governmental agencies as the SRL's opposing party, thus ensuring that the latter's right to have their day in court would only be minimally infringed upon (if at all).⁴⁶

The following section places JODR in the context of established practices of remote participation in judicial hearings, introduces the concept of ODR and provides examples of successful JODR implementations.

II. CONDUCTING JUDICIAL PROCESSES ONLINE

A. Remote Participation in Judicial Proceedings

The idea of improving the accessibility and administration of judicial proceedings through remote participation via communication technologies is not new to the American justice system; it long predates JODR. U.S. courts have been exercising video-conference hearings for over four decades,⁴⁷ such that some of the participants, including the judge, are present in the courtroom, while others, such as a defendant or a witness, participate from a remote location via live two-way video-conferencing.⁴⁸ By 2002, approximately eighty-five percent of federal district courts had access to video-conferencing equipment in at least one of their courtrooms,⁴⁹ but the extent of video-conferencing in both civil

⁴⁵ Barton, *supra* note 1, at 1273 (referring specifically to ODR, arguing that “[i]f pro se courts could ever be convinced to let technology loose, the results would be exceptional: a simple, transparent court system aimed at assisting litigants in a considerate and efficient manner”). Regrettably, Barton does not outline the specifics of this proposal.

⁴⁶ In fact, as a repeat player in such proceedings, governmental agencies can benefit from using a JODR system. See Sela, *supra* note 5 (providing a discussion of some of the advantages that resolving disputes through an ODR system present to large institutions); see also discussion *infra* note 68. Moreover, in many administrative hearings, such as social security hearings, the government is not present in the hearing even in its offline face-to-face version.

⁴⁷ See NAT'L CTR. FOR STATE COURTS, BRIEFING PAPER: VIDEOCONFERENCING 2 (1995), <http://cdm16501.contentdm.oclc.org/cdm/ref/collection/tech/id/532>. Real-time two-way video-conferencing was first used by an Illinois court in 1972 to conduct video-phone bail hearings.

⁴⁸ In each location, participants are able to view the others on a television monitor and both audio and visual signals are transmitted through high-speed telephone lines. See Molly Treadway Johnson & Elizabeth C. Wiggins, *Videoconferencing in Criminal Proceedings: Legal and Empirical Issues and Directions for Research*, 28 LAW & POL'Y 211, 211 (2006).

⁴⁹ Elizabeth C. Wiggins, *What We Know and What We Need to Know about the Effects of Courtroom Technology*, 12 WM. & MARY BILL RTS. J. 731, 732–733 (2004) (deriving the statistic from a 2002 survey of all federal district courts by the Federal Judicial Center).

and criminal federal court proceedings is still fairly limited. Notably, courts can *require* incarcerated defendants⁵⁰ and respondents in immigration removal hearings to participate in certain types of hearings via video conference.⁵¹ State courts also use video-conferencing in a variety of proceedings,⁵² and video-conference hearings have become very common in certain types of administrative proceedings. For example, in 2013 and 2014, video-hearings comprised approximately one third of hearings in many Social Security Offices, and in some offices, they have become more common than in-person hearings.⁵³

Despite some similarities, participation in video-based JODR is different from video hearings. Video hearings typically require remote participants to reach a formal centralized facility in order to connect with the judge (and other courtroom participants) via videoconference. In contrast, in a JODR process, litigants and judges can participate in the hearing from virtually any location, using a device that connects to the internet. Thus, JODR platforms can significantly increase the accessibility of remote hearings and reduce their cost.⁵⁴

Notably, remote participation in legal proceedings, including videoconference hearings is subject to some inherent criticisms. Critics argue that such hearings inevitably skew the perceptions and behavior of the litigants, judge(s) and other courtroom participants by stripping (or over-

⁵⁰ The Prison Litigation Reform Act of 1995, Pub. L. 104-134, 110 Stat. 1321, authorizes use of video conferencing in prisoner pre-trial hearings. In 1996, the Judicial Conference authorized conducting prisoner civil rights pre-trial hearings via video conference. See Treadway Johnson & Wiggins, *supra* note 48, at 213.

⁵¹ Amendments to the Immigration and Nationality Act made in 1996 authorize conducting immigration removal hearings via video-conference without the respondent's consent. 8 U.S.C. § 1229a(b)(2)(A)(iii) (1996) (stipulating that "[t]he proceeding may take place (i) in person [or] . . . (iii) through video conference . . .").

⁵² See Treadway Johnson & Wiggins, *supra* note 48, at 214 (pointing out that state courts use video conferencing in "probable cause hearings, initial appearances, arraignments, bail setting, competency hearings, and various other pretrial motions"); see also NAT'L CTR. FOR STATE COURTS, *supra* note 47.

⁵³ SOC. SECURITY ADMIN., HEARINGS HELD IN-PERSON OR VIA VIDEO CONFERENCING REPORT FY 2014 (FOR REPORTING PURPOSES: 09/28/2013 THROUGH 07/25/2014), https://www.ssa.gov/appeals/DataSets/archive/06_FY2014/06_July_Hearings_Held_InPerson_Video_Report.html. For example, high rates of video hearings were reported by the following Social Security Offices: Charleston, WV (71%), Charlottesville, VA (68%), Franklin, TN (66%), Peoria, IL (71%), and Roanoke, VA (73%); SOC. SECURITY ADMIN., WHY YOU SHOULD HAVE YOUR HEARING BY VIDEO TELECONFERENCE 2-3 (2008), http://www.ssa.gov/appeals/odar_pubs/70-067.pdf (publicizing the service as an efficient method that can make the hearing "more convenient . . . [and] scheduled faster than an in-person appearance").

⁵⁴ The cost of court videoconference proceedings varies and it is not always publicized. A 2007 study of the Ontario Rental Housing Tribunal reports that the cost of renting a videoconference facility for one hearing block averages 1500-1700 Canadian Dollars, depending on whether long distance calls are needed. Lorne Sossin & Zimra Yetnikoff, *I Can See Clearly Now: Videoconference Hearings and the Legal Limit on How Tribunals Allocate Resources*, 25 WINDSOR Y.B. ACCESS JUST. 247, 251 (2007).

emphasizing) certain non-verbal cues, failing to replicate normal eye contact, flattening or exaggerating affect, etc.⁵⁵ They worry that videoconference hearings obstruct the fact-finding process and prevent accurate assessment of customary indices of credibility and demeanor.⁵⁶ The same arguments would likely hold true for text-based remote participation. However, this Article suggests that online remote participation may be justified by other substantive features pertaining to the quality of the process that can outweigh the disadvantages. The experiment described in Part IV examines some of the hypothesized benefits; further research is required in order to evaluate whether, on balance, these procedural tradeoffs benefit SRLs and the justice system.

B. JODR State of the Art

1. From ODR to JODR

JODR systems are a specialized public judicial variant of ODR systems. The term ODR describes a wide array of online procedures and technological tools that disputants and neutrals use to resolve disputes.⁵⁷ The first ODR systems were launched nearly twenty years ago.⁵⁸ Since then, ODR technologies and process designs have been gradually integrated into both private and public justice systems—harboring ADR, administrative and judicial proceedings.⁵⁹ Proponents of ODR argue that it is a natural next evolutionary step, suggesting that technology can make many processes more accessible, less expensive, easier, and faster to complete; and that it entails new features that can improve procedural quality.⁶⁰ Critics of ODR contend that judicial and ADR processes can-

⁵⁵ See, e.g., Anne Bowen Poulin, *Criminal Justice and Videoconferencing Technology: The Remote Defendant*, 78 TUL. L. REV. 1089, 1108 (2004); Frank M. Walsh & Edward M. Walsh, *Effective Processing or Assembly-Line Justice? The Use of Teleconferencing in Asylum Removal Hearings*, 22 GEO. IMMIGR. L.J. 259, 268–69 (2008).

⁵⁶ See *Developments in the Law – Access to Courts, Access to Courts and Videoconferencing in Immigration Court Proceedings*, 122 HARV. L. REV. 1151, 1182 (2009). Another oft-cited concern, which is not relevant to SRLs, is that remote hearings prevent effective representation by counsel. See Kacey Marr, *The Right to “Skype”: The Due Process Concerns of Videoconferencing at Parole Revocation Hearings*, 81 U. CIN. L. REV. 1515, 1532–34 (2013); Poulin, *supra* note 55, at 1130–31; Treadway Johnson & Wiggins, *supra* note 48, at 212.

⁵⁷ See ETHAN KATSH & JANET RIFKIN, *ONLINE DISPUTE RESOLUTION: RESOLVING CONFLICTS IN CYBERSPACE* 1–14 (1st ed. 2001).

⁵⁸ See Ethan Katsh, *ODR: A Look at History*, in *ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE* 9 (Mohamed S. Abdel Wahab et al. eds., 2012).

⁵⁹ See Sela, *supra* note 5 (reviewing the current landscape of ODR systems).

⁶⁰ See Gabrielle Kaufmann-Kohler & Thomas Schultz, *ONLINE DISPUTE RESOLUTION: CHALLENGES FOR CONTEMPORARY JUSTICE* 68–76 (Julian Lew ed., 2004); Ethan Katsh, *Bringing Online Dispute Resolution to Virtual Worlds: Creating Processes Through Code*, 49 N.Y.L. SCH. L. REV. 271, 274 (2004); David Allen Larson, *Technology Mediated Dispute Resolution (TMDR): Opportunities and Dangers*, 38 U. TOL. L. REV. 213, 217 (2006); Jelle van Veenen, *From :(to :-) Using Online Communication to Improve Dispute Resolution* 2

not be adequately conducted online, and that the claimed efficiencies of ODR come at the expense of procedural quality, primarily due to the limitations the online environment imposes on human communication, privacy, confidentiality and neutrality.⁶¹ While the debate is ongoing, the number of ODR service providers is on the rise,⁶² the variety of legal domains in which they operate is growing (including disputes in business and commerce, consumer protection, family law, labor, torts, taxation, small claims, and real estate),⁶³ and their case volume is continuously increasing, currently measured by several tens of millions of disputes annually.⁶⁴

Thanks to its innovative potential and growing impact, many view ODR as a disruptive legal technology,⁶⁵ a part of an evolving “shift in legal paradigm”⁶⁶ that is poised to transform the legal marketplace and

(Tilburg Inst. for Interdisciplinary Studies of Civil Law & Conflict Resolution Sys., Working Paper No. 002/2010, 2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1618719.

⁶¹ See, e.g., 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) (providing examples for non-verbal cues that a mediator may not capture online, such as a speaker’s hesitation, a smile or frown, changes in tempo, and formality or informality in one’s demeanor and tone); Janice Nadler, *Rapport in Legal Negotiation: How Small Talk Can Facilitate E-mail Dealmaking*, 9 HARV. NEGOT. L. REV. 223 (2004) (arguing that negotiating via email can lead to “misunderstandings, sinister attributions, and ultimately, impasse”). Some contend that due to their alleged decreased procedural quality, ODR processes can be justified only for simple low-value disputes. See, e.g., Julio César Betancourt & Elina Zlatanska, *Online Dispute Resolution (ODR): What Is It, and Is It the Way Forward?*, 79 INT’L J. ARB., MEDIATION & DISP. MGMT. 256, 263 (2013); Julia Hornle, *Encouraging Online Dispute Resolution in the EU and Beyond*, 38 EUR. L. REV. 187, 192–94 (2013) (criticizing ODR initiatives that move away from due process and justify this with the argument that cross-border low-value and high volume disputes cannot be solved other than through very efficient, highly automated, and hence, cost-effective procedures).

⁶² See SUSAN SCHIAVETTA, *ELECTRONIC ALTERNATIVE DISPUTE RESOLUTION – INCREASING ACCESS TO JUSTICE VIA PROCEDURAL PROTECTIONS* 3–4 (2008) (describing the general trend of growth in the number of ODR service providers between the years 2000 and 2008).

⁶³ See Sela, *supra* note 5 for a review of trends in ODR process designs and implementations.

⁶⁴ eBay Resolution Center, an ODR platform for e-commerce disputes, reportedly handles over 60 million annual disputes. See Colin Rule & Chittu Nagarajan, *Leveraging the Wisdom of Crowds: The eBay Community Court and the Future of Online Dispute Resolution*, ACRRESOLUTION MAG. (Winter 2010); Bruce T. Cooper, *Online Dispute Resolution Comes of Age*, PRACTICAL LITIGATOR 33, 35 (July 2009); Katsh, *supra* note 58, at 15.

⁶⁵ See RICHARD SUSSKIND, *THE END OF LAWYERS? RETHINKING THE NATURE OF LEGAL SERVICES* 99–145 (2008) (identifying a non-exhaustive list of ten disruptive legal technologies: automated document assembly, relentless connectivity, the electronic legal marketplace, e-learning, online legal guidance, legal open-sourcing, closed legal communities, workflow and project management, embedded legal knowledge, and online dispute resolution. Typically cheaper, simpler, smaller, and more convenient to use, disruptive technologies have the potential to transform industries and markets by challenging the way they operate).

⁶⁶ RICHARD SUSSKIND, *THE FUTURE OF LAW* 97 (revised ed., 1998); RICHARD SUSSKIND, *TOMORROW’S LAWYERS: AN INTRODUCTION TO YOUR FUTURE* (2013) (suggesting that over the next two decades, legal institutions and lawyers are bound to change more radically than they have over the last two centuries).

displace many features of contemporary legal systems.⁶⁷ ODR technologies enable restructuring, simplifying, streamlining, and even automating certain aspects of the dispute resolution process; for example, by breaking the dispute resolution process into discrete steps, collecting information in templates (web-forms), integrating enforceable timelines (and reminders) into the process, enabling users to review content at their own pace, time and again, and providing on-site procedural explanations, support and hand-holding. Such features facilitate effective and efficient case management on the part of ODR service providers,⁶⁸ as well as improve disputants' access to justice by lowering access barriers and empowering them to complete processes on their own.

2. JODR State of the Art and Current Implementations

Despite the advantages of ODR and the fairly wide support JODR received in legal scholarship,⁶⁹ courts and governmental agencies have been relatively slow to adopt JODR. Interestingly, the United States was set to be at the forefront of JODR with the first fully virtual online court initiative legislated in Michigan in 2001.⁷⁰ Regrettably, the Michigan

⁶⁷ See SUSSKIND, *THE FUTURE OF LAW*, *supra* note 66; SUSSKIND, *TOMORROW'S LAWYERS*, *supra* note 66; SUSSKIND, *supra* note 65; Orna Rabinovich-Einy, *Balancing the Scales: The Ford-Firestone Case, the Internet, and the Future Dispute Resolution Landscape*, 6 *YALE J. L. & TECH.* 1, 21 (2004) (“[I]nternet society will . . . alter the dispute resolution landscape in fundamental ways . . .”).

⁶⁸ Case management features include the ability to perform tasks on multiple cases that share common characteristics (such as time filed, issue in dispute, or party identity), identify administrative needs and allocate system resources. See Sela, *supra* note 5.

⁶⁹ See Susan Nauss Exon, *The Internet Meets Obi-Wan Kenobi in the Court of Next Resort*, 8 *B.U. J. SCI. & TECH. L.* 1 (2002) (introducing the creation of an international cyber court); Brian A. Pappas, *Online Court: Online Dispute Resolution and the Future of Small Claims*, 12 *UCLA J.L. & TECH.* (2008) (“Small claims courts, with smaller dollar amounts and less complex issues, are ideally situated to transition their operations online.”); Jessica M. Natale, *Exploring Virtual Legal Presence: The Present and the Promise*, 1 *J. HIGH TECH. L.* 157, 178 (2002) (suggesting that in the future entire trials will be conducted online); Neal Feigenson & Christina Spiesel, *The Juror and Courtroom of the Future in THE FUTURE OF EVIDENCE: HOW SCIENCE & TECHNOLOGY WILL CHANGE THE PRACTICE OF LAW* 113, 113 (Carol Henderson & Jules Epstein eds., 2011) (“Trials will increasingly depend on digitally mediated communication, and proceedings may gradually be de-centered from the traditional bricks-and-mortar courtroom so that not only witnesses but advocates and decision makers will be physically distant from one another but connected online.”).

⁷⁰ In 2001, there was an attempt to establish a fully virtual court in the state of Michigan. H.B. 4140, 2001 Leg., Reg. Session (Mich. 2001). The court was intended to hold fully electronic hearings via audio, video, or internet conferencing, have an automated court reporter, and have a digital audio and video recording system. Judges, lawyers, parties, and witnesses would be allowed to participate remotely from wherever the technology permitted. The court's jurisdiction was meant to include all business and commercial cases in excess of \$25,000, except landlord-tenant, tort, employment, administrative agency, criminal and enforcement of judgment matters. See Lucille M. Ponte, *The Michigan Cyber Court: A Bold Experiment in the Development of the First Public Virtual Courthouse*, 4 *N.C. J.L. & TECH.* 51, 59–65 (2002).

Cyber Court received no funding and was never realized.⁷¹ To date, JODR implementations in the United States can be found primarily in administrative processes and appeals. In contrast, in recent years Europe and Canada have seen major advancements in the field, with significant JODR implementations and initiatives launched. This section reviews the state of the art of JODR implementations in court and administrative settings. These inspiring examples illustrate the great potential of JODR to improve the realities of pro se litigation, and they serve as the basis for the JODR framework proposed in section III for judicial processes involving SRLs.

The longest running JODR system is Money Claim Online (MCOL).⁷² Launched in 2001 in the United Kingdom by Her Majesty's Courts and Tribunals Service, MCOL allows individuals and organizations to file online specified money claims for sums of up to GBP £100,000. MCOL's design leverages technology to offer procedural and functional simplification:⁷³ Using a web-form, the court collects the claimant's and defendant's personal and contact information and the Particulars of Claim which explain what money (and interest) is owed and why (limited to 1080 characters).⁷⁴ Court fees are paid by credit or debit card.⁷⁵ Defendants typically respond by using a standardized response form, which they can submit either online (via email) or by snail mail.⁷⁶ If a case is defended, it will be transferred from MCOL to a mediator or a local court; if the respondent admits or fails to respond, a judgment can be entered online. Payment is made directly to the claimant; if the defendant fails to pay, the claimant may file online for a warrant of execution.⁷⁷ MCOL offers many benefits to litigants: it is accessible year round, twenty-four hours a day; it takes about thirty minutes to file or

⁷¹ See Feigenson & Spiesel, *supra* note 69, at 127.

⁷² See MONEY CLAIM, <https://www.moneyclaim.gov.uk> (last visited Feb. 1, 2017).

⁷³ See Jannis Kallinikos, *Institutional Complexity and Functional Simplification: The Case of Money Claim Online in England and Wales*, in FRANCESCO CONTINI & GIOVAN FRANCESCO LANZARA, *ICT AND INNOVATION IN THE PUBLIC SECTOR: EUROPEAN PERSPECTIVES IN THE MAKING OF E-GOVERNMENT* 174, 175 (2008).

⁷⁴ Longer arguments or additional information may be further served externally. See HM COURTS & TRIBUNALS SERVICE, *MONEY CLAIM ONLINE (MCOL) – USER GUIDE FOR CLAIMANTS* 9–10, 14, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/520203/money-claim-online-user-guide.pdf.

⁷⁵ See *Make a Court Claim for Money*, GOV.UK, <https://www.gov.uk/make-court-claim-for-money/court-fees> (last visited Feb. 1, 2017).

⁷⁶ MCOL Response forms include the following forms: Acknowledgment of Service, States Paid Defense, Full Defense, Counterclaim, Part Admission, and Full Admission. The respondent may also not send any response, or send payment directly to the claimant. See *MONEY CLAIM ONLINE (MCOL) – USER GUIDE FOR CLAIMANT*, *supra* note 74, at 14–15. Notably, serving respondents is the only procedural component that cannot be completed online; respondents receive claims to their mailing address.

⁷⁷ Requests for other enforcement methods are not available online. MCOL User Guide, *supra* note 74, at 20.

defend a claim; and it is subject to lower court fees.⁷⁸ MCOL has also had positive institutional effects, such as “remov[ing] time consuming and repetitive administrative work from the court, reducing the cost of litigation and freeing up resources to do other work.”⁷⁹ Today, MCOL issues more claims than any other local county court in the United Kingdom.

The asynchronous text-based JODR process design model pioneered by MCOL was implemented and further developed in other judicial settings that add a substantial hearing component to the process. For example, several counties in the United States⁸⁰ and Canada⁸¹ launched form-based JODR systems to enable their constituents to file and conduct appeals on property assessment tax decisions. Taxpayers (or their agents) use the JODR system to provide details about the owner, the property subject to appeal, and the issues at stake.⁸² They can also provide a free-text statement and upload files in support of their appeal. The assessor’s decision is issued on the online platform.⁸³ Adding to the MCOL model, these tax appeal JODR systems support continued appeal-related online communication between appellants and tax assessors (acting as appeal judicial officers), which are conducted on a message-board interface. Like MCOL, these JODR systems simplify and streamline the appeal process for appellants and increase institutional efficiencies for the agency.⁸⁴

Adding further functionalities, the Traffic Penalty Tribunal (TPT) of England and Wales has recently launched a JODR system⁸⁵ for appealing penalties issued due to traffic violations. Using automated diagnostic questionnaires, the TPT JODR system prevents procedural errors by

⁷⁸ Cf. *Make a Money Claim Online*, GOV.UK, <https://www.gov.uk/make-money-claim-online> (last visited Feb. 1, 2017).

⁷⁹ See MINISTRY OF JUSTICE, JUDICIARY AND COURT STATISTICS 2011 13 (2012), <http://www.justice.gov.uk/downloads/statistics/courts-and-sentencing/jcs-2011/judicial-court-stats-2011.pdf>.

⁸⁰ See, e.g., OHIO Bd. OF TAX APPEALS, <http://bta.ohio.gov> (last visited Feb. 1, 2017); ALACHUA CTY. PROP. APPRAISER, <http://www.acpafl.org/ResCenter/index.html> (last visited Feb. 1, 2017); FULTON CTY. Bd. OF ASSESSORS RESOLUTION CTR., <https://fultoncounty.modria.com> (last visited Feb. 1, 2017); ASSESSOR OF PROP., DAVIDSON CTY., TN, <https://padctn.modria.com> (last visited Feb. 1, 2017).

⁸¹ See, e.g., *Submit an Appeal*, PROP. ASSESSMENT APPEAL Bd. OF B.C., <http://www.assessmentappeal.bc.ca/SubmitAnAppeal/> (last visited Feb. 1, 2017).

⁸² Users are required to select from a closed list of issues, such as fair market value, land data, combat discount, and an “other” option with free text. See *id.* (providing a how-to guide to the system’s operation).

⁸³ A demo describing all stages of the process on the platform is available at *Get a Live Demo*, MODRIA, <http://modria.com/free-demo> (last visited Feb. 1, 2017).

⁸⁴ For example, through case management features such as automatic identification of cases in which all procedural requirements have been for fulfilled for an assessor’s review. *Id.*

⁸⁵ *I Want to Appeal*, TRAFFIC PENALTY TRIBUNAL OF ENG. & WALES, <http://www.trafficpenaltytribunal.gov.uk/want-to-appeal> (last visited Feb. 1, 2017).

identifying whether appellants have met the procedural requirements for filing an appeal. Eligible appellants are directed to a single online dashboard which is used to file the appeal, upload and comment on evidence, and follow the progression of the case through hearings and the final decision. The responding authority accesses the system through a similar dashboard, showing its entire case docket and improving efficient processing by prompting required actions on each case. Administrators and adjudicators use their own customized dashboard to manage their caseload, send directions to the parties, and see submitted materials. Appellants can execute all procedural actions on the platform, including requesting their preferred hearing type: “e-decision,” telephone hearing, or face-to-face hearing.⁸⁶ The tribunal’s latest report (2014–15) indicates that 68% of the hearings are done exclusively online (“e-decision”). Only 12% of the cases involve a face-to-face hearing, and in the remaining 20% of telephone hearings, the adjudicator can use the online platform to discuss the evidence with the parties.⁸⁷

The motivation for implementing JODR systems in judicial proceedings is not limited to efficiency considerations. Other values and goals that are achievable through technology—such as introducing qualitative enhancements to the nature of dispute resolution processes and increasing accountability, fairness, and equality—have also had an effect, even if to a lesser extent.⁸⁸ Indeed, some JODR models incorporate procedural elements that represent a “demand side” litigant-centered approach,⁸⁹ intended to improve the *quality* of their experience.

An example of such a JODR system is the Civil Resolution Tribunal (CRT)⁹⁰ in the Canadian District of British Columbia, which uses online problem diagnosis as the first stage of a gradually escalating sequence of

⁸⁶ *How Your Appeal Will Be Decided*, TRAFFIC PENALTY TRIBUNAL OF ENG. & WALES, <https://www.trafficpenaltytribunal.gov.uk/how-your-appeal-will-be-decided> (last visited Feb. 1, 2017).

⁸⁷ TRAFFIC PENALTY TRIBUNAL OF ENG. & WALES, ANNUAL STATISTICS REPORT 2014–2015 7 https://www.trafficpenaltytribunal.gov.uk/wp-content/uploads/2016/11/TPT_Annual_Statistics_Report_14_15.pdf. These figures exclude cases not contested by councils or withdrawn by appellants.

⁸⁸ See Orna Rabinovich-Einy, *Beyond Efficiency: The Transformation of Courts by Technology*, 12 UCLA J.L. & TECH. 1, 5 (2008) (“[T]echnology’s . . . potential to generate improved systems that are successful in advancing additional values. . . has not been fully realized.”); see also *supra* note 44.

⁸⁹ See Martin Gramatikov, *Methodological Challenges in Measuring Cost and Quality of Access to Justice* 3, 7 (Tilburg Univ. Legal Studies, Working Paper No. 005/2008, 2007), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1099392 (“[While] supply side research reveals in detail how legal institutions practice and interpret the concept of access to justice . . . on the demand side of the axis, access to justice is measured from the perspective of potential users of justice . . . trying to estimate the[ir] needs . . . perceptions, preferences and values . . .”); see also Steinberg, *supra* note 20.

⁹⁰ Civil Resolution Tribunal, <https://www.civilresolutionbc.ca> (last visited Feb. 1, 2017).

ODR and JODR processes.⁹¹ “Canada’s first ‘online’ tribunal”⁹² was instituted by law in May 2012,⁹³ as part of the District’s civil justice reform, and it began processing cases in July 2016.⁹⁴ It is a JODR system for small claims (up to 25,000 Canadian Dollars in value), strata property disputes and traffic disputes that enables users to go through online problem diagnosis, party-to-party negotiation, facilitation (mediation) and if necessary, adjudication based on the evidence and arguments submitted through the system.⁹⁵ CRT’s processes are designed to be conducted online based on the parties’ submitted written materials, adding video or audio communication as necessary.⁹⁶ In rare circumstances, by discretion of the facilitator or tribunal, face-to-face hearings may be held. In an attempt to integrate the functionalities of legal self-help website into the JODR process, the CRT launched the Solution Explorer module.⁹⁷ The module serves as an online problem diagnosis and self-help system, which educates parties about their rights and possible courses of action, and facilitates their access to online self-service resolution options. Using a dynamic online questionnaire, the system allows the user to “explore” or diagnose the problems they face. Once the issues have been identified, the system presents the user with relevant legal information and possible courses of action to remedy the situation before turning to the tribunal as a last resort (for example, letter templates to other parties).⁹⁸ Thus, the CRT effectively handholds SRLs as they navigate the process, by integrating the legal-aid resources into the process itself. SRLs who use the system receive a written summary of the process and information they received, which they can later choose to transform into an online claim in the CRT.⁹⁹ In addition, CRT enables SRLs to explore several self-help options in parallel (and choose the best fit) and to examine simultaneously (and bundle) multiple related claims, thereby facilitating simulta-

⁹¹ *How CRT Works*, CIVIL RESOLUTION TRIBUNAL, <https://www.civilresolutionbc.ca/steps> (last visited Feb. 1, 2017).

⁹² B.C. MINISTRY OF JUSTICE, WHITE PAPER ON JUSTICE REFORM: PART TWO: A TIMELY BALANCED JUSTICE SYSTEM 11 (2013), <http://www2.gov.bc.ca/assets/gov/law-crime-and-justice/about-bc-justice-system/justice-reform-initiatives/whitepapertwo.pdf>.

⁹³ Civil Resolution Tribunal Act, S.B.C. 2012, c 25 (Can.).

⁹⁴ *CRT First Launched for Strata Disputes*, CIVIL RESOLUTION TRIBUNAL (July 13, 2016), <http://www.civilresolutionbc.ca/the-crt-is-accepting-strata-claims-for-early-intake/>.

⁹⁵ *How CRT Works*, *supra* note 91.

⁹⁶ *See id.*; *see also* B.C. MINISTRY OF JUSTICE, DISPUTE RESOLUTION MODEL FOR THE PROPOSED CIVIL RESOLUTION TRIBUNAL (2012), http://www.llbc.leg.bc.ca/public/pubdocs/bcdocs2012_2/520265/civil_tribunal_business_model_cdr_t_03-05-12_final.pdf.

⁹⁷ *Getting Started*, CIVIL RESOLUTION TRIBUNAL, <https://www.civilresolutionbc.ca/self-help> (last visited Feb. 1, 2017).

⁹⁸ *See id.*

⁹⁹ *Id.*

neous exhaustion of resolution options and supporting quick and comprehensive resolutions.¹⁰⁰

Another noteworthy court-connected ODR initiative is *Burenrechter*, a JODR procedure for resolving neighbor disputes commissioned by the Dutch Council of the Judiciary.¹⁰¹ Similar to CRT, it employs a tiered process design intended to both educate and guide the parties about the process and facilitate their access to it by offering to convene it online. The two parties begin the process by completing an online intake process reporting their position, continue in direct dialogue via a web interface, and progress to an online mediation by a judiciary staff member. If resolution is not achieved, a judge intervenes, either facilitating a settlement or issuing a binding decision.¹⁰² The process includes an online follow-up mechanism to enable the court to monitor whether the neighborly situation improved after the case was concluded.¹⁰³

Concluding this review of JODR state of the art is a recent important development which paves the way for the establishment of a generic online civil court designed specifically for SRLs. In January 2016, Lord Justice Briggs published the interim report of the Civil Courts Structure Review commissioned by the Judiciary of England and Wales.¹⁰⁴ One of the most important structural changes the report suggests is the establishment of an online court for claims up to £25,000, specifically designed as “the first court ever to be designed in this country, from start to finish, for use by litigants without lawyers.”¹⁰⁵ The envisioned JODR system, which is proposed to be piloted in 2017, consists of three stages:

[S]tage 1 will consist of a mainly automated process by which litigants are assisted in identifying their case (or defence) online in terms sufficiently well ordered to be suitable to be understood by their opponents and resolved by the court, and required to upload (i.e. place online) the documents and other evidence which the court will need for the purpose of resolution. Stage 2 will involve a mix of conciliation and case management, mainly by a Case Officer, conducted partly online, partly by telephone, but probably not face-to-face. Stage 3 will

¹⁰⁰ *Id.*

¹⁰¹ *Burenrechter; State of The Art Resolution for Neighbour Disputes*, HIIL: INNOVATING JUST., <http://www.hiil.org/project/neighbour-disputes> (last visited Feb. 1, 2017).

¹⁰² The judge may conduct further hearings offline before issuing the decision. *Id.*

¹⁰³ *Id.*

¹⁰⁴ 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>.

¹⁰⁵ *Id.* at 75.

consist of determination by judges . . . either on the documents, on the telephone, by video or at face-to-face hearings, but with no default assumption that there must be a traditional trial.¹⁰⁶

The review of ODR and JODR implementations demonstrates that the technology for conducting all activities related to judicial proceedings online is readily available and vetted.¹⁰⁷ Building on these experiences, the following section outlines a framework for JODR systems designed to improve the realities of judicial proceedings involving SRLs in the American justice system.

III. ALLEVIATING CHALLENGES OF PRO SE LITIGATION WITH JODR

A. *Modeling the Challenges of Pro Se Litigation and Technology*

The discussion in Part I highlights four key challenges associated with self-representation in civil and administrative judicial processes: knowledge, participation, operation, and ethics. First, SRLs typically lack the procedural and substantive legal knowledge necessary to successfully manage their case and present their arguments. Second, SRLs often fail to effectively participate in judicial processes because the structural dynamics of the adversarial system “silence” them. Third, the operation of judicial operations is severely burdened by the resource investment necessary to mitigate SRLs’ procedural and substantive errors. Fourth, judicial bodies face an ethical dilemma in balancing between assisting SRLs to receive effective access to justice and maintaining judicial impartiality. The goal of a JODR system for SRLs is to mitigate these challenges without creating new ones.

The specific challenges of pro se litigation are joined by general access barriers to judicial proceedings, such as the need to be physically present at hearings that are held during business hours or the costs associated with travel and potential loss of wages, which can be prohibitive for low-income SRLs or those who live in remote or rural areas.¹⁰⁸ A JODR system can be effective in such circumstances,¹⁰⁹ but there are inherent barriers to technology, too. The most fundamental challenge is

¹⁰⁶ *Id.* at 76.

¹⁰⁷ See also Sela, *supra* note 5.

¹⁰⁸ Landsman, *supra* note 11, at 240 (“[S]everal studies have found that the large majority of pro se litigants do not seek and would not qualify to proceed *in forma pauperis*, in other words, as true indigents.”) (referring to Park, *supra* note 14, at 823); Thompson, *supra* note 13, at 618; UTAH JUDICIAL COUNCIL STANDING COMM. ON RES. FOR SELF-REPRESENTED PARTIES, FINAL REPORT: 2006 SURVEY OF SELF-REPRESENTED PARTIES IN THE UTAH STATE COURTS 3 (Nov. 2006), <http://www.utcourts.gov/survey/FinalSurveyReptToCouncilfrJVB2006-11-01.pdf>.

¹⁰⁹ See Cabral et al., *supra* note 4, at 261–62.

internet access. Although over 70% of American households have home internet access,¹¹⁰ access to high-speed/broadband connection remains a problem for certain segments in society.¹¹¹ The unavailability of broadband internet access has been identified as a prohibitive limitation on some forms of technology-enabled access to justice initiatives, such as the use of video-conferencing by legal-aid organizations and judicial bodies.¹¹² Notwithstanding these limitations, as others have argued, “the digital divide was never a sufficient reason not to make maximal use of the internet for persons who did have access to it.”¹¹³ Rather, the design of JODR systems for SRLs should be mindful of these constraints, for example, by removing or minimizing the dependency on broadband internet connection.

B. A Framework for JODR Systems for Pro Se Litigation

Drawing on the analysis in the previous sections, it is suggested that JODR systems for SRLs in civil and administrative processes should be guided by six goals,¹¹⁴ such that their procedural design will: empower and support effective and meaningful participation of SRLs in the process; streamline and improve the handling of pro se cases by judicial bodies, making efficient and advantageous use of their resources; promote SRLs’ access to justice without jeopardizing judicial impartiality; mitigate physical, financial and technological accessibility challenges, such as time, physical space, manpower, and bandwidth; meet standards of procedural fairness; and scale to manage the expected growth in legal self-representation.

The purpose of this section is not to design a JODR system for pro se litigation; any such system will need to be tailored to the *specific* pro-

¹¹⁰ *Digital Nation Data Explorer*, NAT’L TELECOMM. & INFO. ADMIN. (Mar. 21, 2016), <https://www.ntia.doc.gov/other-publication/2016/digital-nation-data-explorer>.

¹¹¹ See *Home Broadband 2013*, PEW RESEARCH CTR. (Aug. 26, 2013), <http://www.pewinternet.org/2013/08/26/home-broadband-2013> (identifying adults who have not completed high school, adults over the age of 50, and those living in households earning less than \$50,000 per year as the demographic factors most correlated with lack of broadband internet connection); see also Cabral et al., *supra* note 4, at 262.

¹¹² See Cabral et al., *supra* note 4, at 255 (“[B]andwidth and maintenance requirements have limited the use of videoconferencing . . .”). Some court and legal-aid organizations have therefore opted to make their online programs accessible not only via website (on home computers or other computers, such as in public libraries) but also via kiosks (dedicated terminals) located on their premises. For example, the I-CAN! online form preparation self-help tool for SLRs can be “accessed on a Web site or at kiosks with touch-screen computers.” SUPERIOR COURT OF ORANGE CTY., INTERACTIVE COMMUNITY ASSISTANCE NETWORK (I-CAN!) 1, http://www.courts.ca.gov/documents/KlepsBrief_ICAN.pdf.

¹¹³ Cabral et al., *supra* note 4, at 266.

¹¹⁴ See Stephanie Smith & Janet K. Martinez, *An Analytic Framework for Dispute Systems Design*, 14 HARV. NEGOT. L. REV. 123 (2009) (the importance of tailoring the dispute system design framework to the system’s specific goals, impacted stakeholders, available resources, etc.).

cess it is intended to serve.¹¹⁵ Rather, the proposed framework provides a set of design principles that mitigate the identified challenges and promote the abovementioned goals. As such, it serves as a policy roadmap to guide the growing demand for designing JODR systems for SRLs. For clarity, the framework is described from the perspective of SRLs; however, the subsequently outlined principles refer also to the perspectives of judicial bodies and SRLs' governmental adversaries.

1. General Framework

JODR systems for SRLs are envisioned to follow a tiered, streamlined, and structured process design that supports SRLs from pre-filing through enforcement of the final decision. The process begins with SRLs informing and educating themselves about the legal procedure and substance relevant to their case.¹¹⁶ This initial stage is integrated with an active self-help tool that helps SRLs explore and take available actions to resolve the issue without filing a claim in court (for example, a self-guided wizard for writing a demand letter).¹¹⁷ When SRLs are ready to file or respond to a case, they are guided by a streamlined and structured plain-language questionnaire that collects the information needed for filing or responding in their case. If necessary, their responses to the web-form questionnaire can be used to auto-generate a formal legal document that can be filed.¹¹⁸ The intake stage is designed to prevent filing errors (confirming procedural requirements, appropriate jurisdiction, etc.) and improve the quality of the document. To guide SRLs through the process, web-forms contain help buttons with procedural and substantive legal aid materials customized for each specific item. The JODR system facilitates access to court-sponsored or external human-powered legal-aid assistance as needed, by way of email, chat, or video conference.¹¹⁹

¹¹⁵ See, e.g., Amy J. Cohen, *Dispute Systems Design, Neoliberalism, and the Problem of Scale*, 14 HARV. NEGOT. L. REV. 51 (2009) (suggesting that dispute system design choices should be mindful of contextual and institutional variables that are likely to affect parties, and particularly power imbalances, in the process); Smith & Martinez, *supra* note 111.

¹¹⁶ This functionality is already supported by many courts' online self-help centers. See discussion *supra* note 38. *But see* JOINT TASK FORCE REPORT, *supra* note 18, at 8 ("One complication that technological assistance adds to the delivery of self-help materials is that they require a uniform approach statewide. In many states, variations in local court rules and judicial preferences concerning the content and design of court documents make it very difficult, if not impossible, to provide these materials over the Internet. If new technologies are to become an integral component of *pro se* assistance programs, local courts and judges must be persuaded to forego parochial interests in favor of greater statewide consistency and uniformity.").

¹¹⁷ The CRT offers such a self-help wizard. See *supra* text accompanying notes 90–100.

¹¹⁸ For example, the A2J Author project is used to create plain language online questionnaires that generate legal documents servable in court. See ACCESS TO JUSTICE AUTHOR, <http://www.a2jauthor.org> (last visited Feb. 1, 2017).

¹¹⁹ Such a model is successfully implemented by legal aid providers. See Cabral et al., *supra* note 4 (reviewing the wide array of online legal-aid services, including remote consulta-

Once a case reaches the hearing stage, SRLs communicate with the judge or administrative law judge (ALJ) via an online communication system using text, audio, or video communication. If the governmental agency is actively represented in the process, its representatives similarly participate. The judge renders all decisions on the JODR system. As further explained below, there are significant advantages to JODR systems for SRLs that rely on asynchronous communication channels, providing non-contemporaneous exchange of discrete text, audio, and/or video messages.

To effectively orient SRLs in the process, the JODR system clearly indicates the current procedural phase the SRL is engaged in (for example, using a progress bar). The system auto-generates notifications and “action required” reminders that are sent to SRLs via email or other means of messaging. Procedural actions, such as filing motions and requests, are easily accessible and executable on the platform. When relevant, court-connected ADR options can be accessed and similarly conducted on a related ODR system. Finally, based on the model which was successfully implemented by MCOL, CRT, and TPT,¹²⁰ in some instances it may be appropriate to provide hybrid process designs,¹²¹ combining the JODR process with a traditional in-person hearing, or to direct SRLs to a completely offline process (for instance, SRLs who are unable or unwilling to use the JODR system).

Importantly, the proposed framework for JODR systems for SRLs can be adapted to operate under a host of procedural regimes. Pertinently, some scholars and policy makers contend that civil procedure rules are overly complex, calling for significant reforms of the justice system. These calls are at least partly motivated by demands to adapt and simplify civil procedure rules to support SRLs’ effective access to justice. In other words, from a system design perspective, rather than designing a system to help SRLs articulate cognizable claims and defenses, complete pleadings and file the proper documents in the proper format,

tion, facilitated by online technologies, including chat, email, discussion boards and video conference).

¹²⁰ See *supra* Section II(B)(2).

¹²¹ Hybrid process designs may be desirable in certain circumstances. See, e.g., Katalien Bollen & Martin Euwema, *The Role of Hierarchy in Face-to-Face and E-Supported Mediations: The Use of an Online Intake to Balance the Influence of Hierarchy*, 6 NEGOT. & CONFLICT MGMT. RES. 305 (2013) (presenting an empirical study comparing face-to-face mediation with a hybrid process combining online intake with face-to-face mediation in hierarchical labor settings, showing that the hybrid process had an equalizing effect on fairness and satisfaction perceptions of both parties). Some private ODR services providers also offer hybrid process designs. For example, Wevorce offers a hybrid divorce mediation process, beginning with an online automated intake process to collect information from the parties, identify issues in dispute, and develop strategies to address them, which is then followed by face-to-face mediation to address any unresolved issues. WEVORCE, <http://wevorce.com> (last visited Feb. 1, 2017).

serve the opposing party (and prepare a proof of service), schedule the proper hearings, understand court notices and decisions, handle motions, compose and respond to discovery requests, manage settlement talks, interact with an opponent's attorney, contend with the rules of evidence, and examine and cross-examine witnesses—it may be more desirable to enact a systemic procedural reform to significantly simplify the rules that govern the proceedings. Whether or not the procedural regime is reformed, JODR systems can be designed to effectuate the applicable processes and rules.¹²²

The following sub-sections further detail the system design principles of the proposed JODR model for legal self-representation.

2. Availability, Time, Cost, Infrastructure

The migration of judicial processes to an asynchronous online platform can significantly improve the accessibility of the process. First, SRLs can access the platform at any given time, unconstrained by regular business hours. Continuous online accessibility reduces barriers which characterize in-person pre-filing preparation, filing, and hearings, work leave, and the time and cost of travel.¹²³ Conducting hearings asynchronously means that the infrastructure (and cost) requirements on the part of both judicial bodies and litigants can be kept to a minimum. SRLs would be able to access the process via any bandwidth of internet connection, and judicial bodies would not be burdened by the cost of maintaining high-capacity internet connection and servers. Relatedly, asynchronous processes reduce the risk that hearings will be delayed or canceled due to temporary technical failures.

3. Automated Real-Time Legal Aid: Reducing Errors and Judicial Bias

A JODR system is an effective means for educating SRLs about legal procedure and substance relevant to their case both before and during the litigation, overcoming several challenges that hinder the successfulness of current legal aid provisions. As the review in Part I explains, ethical rules limit the ability of court personnel and judges to provide legal information and advice to SRLs, resulting in “pro se litigants [being] largely left to their own devices when navigating through both the pre-trial and trial stages of their cases.”¹²⁴ The high rates of SRLs' case dismissals and their generally inferior outcomes¹²⁵ suggest that available

¹²² See Steinberg, *supra* note 20; see also Briggs, *supra* note 104.

¹²³ The system should make clear, however, that judges (and opposing party, if relevant) cannot be expected to respond outside business hours.

¹²⁴ Van Wormer, *supra* note 8, at 995.

¹²⁵ See *supra* text accompanying notes 22–23.

legal aid resources, which are offered primarily during the pre-filing stage,¹²⁶ do not mitigate the problem.

A streamlined, structured, simplified, and guided JODR process can improve the accessibility and relevance of online legal-aid by providing SRLs with the relevant information at the right time. Similar services have been perfected and vetted by legal aid organizations (such as I-CAN!¹²⁷ and Law Help Interactive¹²⁸) as well as by legal “do-it-yourself” websites (such as LegalZoom¹²⁹ and Rocket Lawyer¹³⁰), proving very effective in assisting SRLs.¹³¹ On a JODR system, SRLs can review on-site legal aid materials tailored for each specific procedural stage they progress through. Thus, a JODR system can greatly reduce the likelihood of common SRLs’ procedural and substantive mistakes, for example, “cases. . . dismissed [sua sponte] for clearly identifiable and correctable reasons such as improper venue;”¹³² SRL’s “inability to concisely formulate discovery requests,” or SRLs’ “fil[ing of] a myriad of motions to get several documents.”¹³³ Naturally, reducing the rate of SRLs’ procedural mistakes would result in minimization of the negative institutional consequences of these mistakes on the operation of courts.¹³⁴ Accordingly, in addition to a searchable and easy-to-navigate centralized online help center, the online interface for completing each action in the process (e.g. filing a particular motion) can include the specific procedural and substantive instructions relevant to it and an automated vetting mechanism for common mistakes.

The readily analyzable information gleaned from such structured submissions can help judicial bodies make an initial determination whether the information provided forms a claim, whether more information is needed, or whether the case should be dismissed. Initial screening and dismissal of unwarranted cases, prior to issuing a docket number and summons, can save resources for all parties involved: courts will avoid

¹²⁶ See Rosenbloom, *supra* note 13, at 364 (pointing out that often times the only stage in which litigants communicate with the court to receive assistance is when they draft their complaint).

¹²⁷ I-CAN! LEGAL, <http://www.legalican.com/> (last visited Feb. 1, 2017).

¹²⁸ LAWHHELPINTERACTIVE, <http://www.lawhelpinteractive.org> (last visited Feb. 1, 2017).

¹²⁹ LEGALZOOM, <http://www.legalzoom.com> (last visited Feb. 1, 2017).

¹³⁰ ROCKET LAWYER, <http://www.rocketlawyer.com> (last visited Feb. 1, 2017).

¹³¹ For example, after the implementation of I-CAN!, an online tool assisting SRLs to complete court forms, Orange County Superior Court judges reported that “users were better prepared and more familiar with court procedures.” See SUPERIOR COURT OF ORANGE CTY., *supra* note 112, at 2.

¹³² Rosenbloom, *supra* note 13, at 364.

¹³³ *Id.* at 377.

¹³⁴ Some elements can be largely automated to prevent mistakes, such as identification of proper venue or verification of data entries into web-forms (e.g. date, currency, address verification). See also *supra* text accompanying notes 85–86 (describing the TPT JODR system).

processing and issuing summons, claimants will avoid serving the complaint, and defendants will avoid drafting an answer.¹³⁵

These benefits are not merely speculative assumptions: after the implementation of I-CAN!, an online tool assisting SRLs to complete court forms, superior court judges in Orange County, California, reported that “users were better prepared and more familiar with court procedures” and that “they could help six I-CAN! users in the time they previously spent with one self-represented litigant.”¹³⁶ By maintaining a visual and substantive distinction between help content provided by the JODR system (website) and communications of the judge/ALJ/clerk, an appropriate balance can be achieved between the duty of judicial bodies to facilitate SRLs’ effective access to justice and their duty to maintain judicial impartiality.

Finally, some courts have experimented with online self-assessment tools to help prospective SRLs determine the advisability of proceeding pro se. These tools take into account factors such as “case characteristics that might indicate a higher degree of legal complexity (such as the existence of a pension in a divorce case) as well as the litigant’s own personality traits, organization skills, knowledge of legal concepts, and motivation for pursuing the case.”¹³⁷ Such tools can be offered in the pre-filing stage and adapted to determine the suitability of the JODR process to the needs and abilities of a specific SRL.

4. Judicial Docket Management and Case Processing

One of the greatest benefits of JODR systems compared to in-person processes is that they greatly reduce institutional dependency on physical space and its associated resource contingencies. In-person hearings require scheduling cases sequentially during specific hearing dates in which specific physical resources (court rooms) and human resources (judges, clerks, etc.) are available. This framework—especially given that SRLs often fail to appear to hearings—results in tremendous resource-management inefficiencies and unnecessary delays. Conducting hearings online asynchronously breaks the traditional dependency between a specific judge, court room, timeframe, and litigants. Granting judges greater control and flexibility over the management of their growing dockets can result in improved efficiencies and reduced delays. Moreover, online processes enable the sharing of dockets across physical locations (and even courts) and streamlining administrative tasks such as

¹³⁵ See also Rosenbloom, *supra* note 13, at 368 (advocating manual pre-screening of pro se cases by courts’ pro se assistance office).

¹³⁶ I-CAN! LEGAL *supra* note 127.

¹³⁷ JOINT TASK FORCE REPORT, *supra* note 18, at 8.

oversight of deadlines and delivery of court documents to parties.¹³⁸ Finally, one commonly cited problem with SRLs' court documents is that they are incomplete or indecipherable, making it difficult for judges to determine whether their claim has a legally cognizable basis. A JODR system would encourage the filing of court documents via structured web-forms and/or digital text editors, thereby improving their completeness and legibility and facilitating their processing.¹³⁹

5. Process Dynamics and Effectiveness: SRLs' Meaningful Participation

As the discussion in Part I indicates, multiple studies of pro se litigation dynamics demonstrate that SRLs often fail to meaningfully and effectively participate in judicial processes because their intuitive relational narrative-based accounts are at odds with the strictures of the legal adversarial process. These studies suggest that the structural dynamic of the process results in SRLs' accounts being regularly interrupted and dismissed, leading to their effective "silencing." SRLs' meaningful participation impacts not only their subjective experience; it improves the ability of judges/ALJs to glean information and make fair decisions.¹⁴⁰ It is therefore suggested that judicial processes should "ensur[e] pro se litigators a genuine opportunity to voice their views."¹⁴¹ Indeed, the Supreme Court has long recognized that "[t]he opportunity to be heard must be tailored to the capacities and circumstances of those who are to be heard."¹⁴² While it has rejected the model of a universal right to counsel to that end, in a fairly recent decision it established that trial courts should implement "substitute procedural safeguards" to guarantee SRLs' due process standards.¹⁴³

Accordingly, the proposed framework for a JODR system for SRLs is based on conducting the process *asynchronously*. Asynchronous communication is based on the non-contemporaneous exchange of discrete text, audio and/or video messages via an appropriate platform. While

¹³⁸ See *supra* Section II (providing additional examples of institutional case management benefits of judicial ODR systems).

¹³⁹ See also Rosenbloom, *supra* note 13, at 364 ("[C]learer and more legible papers . . . will increase the amount of time and resources the court will have to allocate to meritorious pro se cases.").

¹⁴⁰ See *supra* text accompanying notes 27–28 and 32–33.

¹⁴¹ Landsman, *supra* note 3, at 450.

¹⁴² *Goldberg v. Kelly*, 397 U.S. 254, 268–69 (1970) (asserting in the context of governmental benefit evidentiary hearings that holding indigent litigants to written submissions was constitutionally impermissible when they "lack the educational attainment necessary to write effectively").

¹⁴³ *Turner v. Rogers*, 564 U.S. 431, 435, 447 (2011); see also *supra* note 20, at 788–93 (discussing the "evolution in the Court's thinking on access to justice" through "substitute procedural safeguards").

synchronous “live” communication, such as video-conferencing has many advantages, asynchronous communication would be advantageous in the contexts of SRLs. Asynchronous communication has the potential to neutralize the observed negative elements of in-person hearings, thereby improving SRLs’ ability to participate in the process, the quality of their legal arguments, and subsequently, the decisions rendered in the process. Several arguments support this proposal.

First, conducting the process asynchronously allows the process (including hearings) to proceed regardless of whether all involved parties simultaneously participate, thereby removing scheduling constraints and increasing the accessibility of the process. Second, it would provide SRLs the opportunity to thoughtfully prepare and edit their accounts¹⁴⁴ while benefiting from specifically-tailored procedural and substantive guidance during the *hearing* process. Thus, the quality and legal relevance of their account is expected to improve. Third, to respect judges’ time, promote efficiency, and encourage judges’ attentive review of SRLs arguments, the extent of each account can be bound by technologically-imposed structural limitations (e.g. format or size, such as word limit or time limit). Fourth, an asynchronous process enables SRLs to edit their submissions until they are satisfied with the outcome, thus preventing their “silencing,” and potentially improving the effectiveness of their participation. Fifth, by its very nature, asynchronous communication structurally prevents speakers from being interrupted, thereby guaranteeing SRLs an opportunity to present their arguments. Finally, research shows that asynchronous electronic communication prevents any one individual from dominating the discussion and suppressing the views of others, thereby undermining the effect of existing power dynamics.¹⁴⁵ Thus, when there are status differences, online asynchronous interaction renders higher-status parties more likely to attend to and be influenced by information that is provided by lower-status parties, and causes lower-status parties to be “less likely to satisfice and more likely to seek to maximize their own outcomes.”¹⁴⁶ In other words, it can neu-

¹⁴⁴ See Zoe I. Barsness & Anita D. Bhappu, *At the Crossroads of Culture and Technology: Social Influence and Information-Sharing Processes During Negotiation*, in THE HANDBOOK OF NEGOTIATION AND CULTURE 350, 354–57 (Michele J. Gelfand & Jeanne M. Brett eds., 2004) (explaining in the context of e-negotiation that when negotiators are physically isolated they can “step out” of the discussion and thoughtfully respond; rather than merely react to the other party’s behavior, thereby limiting the escalation of conflict).

¹⁴⁵ J. F. Nunamaker, Jr. et al., *Information Technology for Negotiating Groups: Generating Options for Mutual Gain*, 37 MGMT. SCI. 1325 (1991).

¹⁴⁶ Barsness & Bhappu, *supra* note 144, at 366; see also Rosalie J. Ocker & Gayle J. Yaverbaum, *Asynchronous Computer-Mediated Communication Versus Face-to-Face Collaboration: Results on Student Learning, Quality and Satisfaction*, 8 GROUP DECISION & NEGOT. 427, 429 (1999) (showing that people attend more closely to message content in electronic contexts); Anita D. Bhappu, Terri L. Griffith & Gregory B. Northcraft, *Media Effects and*

tralize many of the negative aspects of courtroom dynamics for both SRLs and judges.¹⁴⁷

In addition to substantive arguments, technical considerations—some of which carry substantive implications—also support conducting the JODR process asynchronously. An asynchronous process places much smaller bandwidth and server demands on SRLs and courts, thus reducing SRLs’ access barriers (by enabling access from any connection regardless of bandwidth) and the operational cost imposed on courts. Relatedly, asynchronous processes avoid the risk of low transmission quality, which characterizes synchronous processes and can have detrimental effects. For example, one study of immigration removal hearings conducted by synchronous video-conferencing found that nearly 45% of hearings suffered from image freezing, split-second transmission delays or poor sound quality, which affected the video-transmission “in a subtle way,” making “the immigrant appear less truthful” and “emotions [be] less clearly communicated.”¹⁴⁸

To conclude, although traditionally judicial hearings are conducted almost exclusively in person (synchronously), a host of substantive and technical considerations suggest there may be practical and normative advantages to offering SRLs asynchronous JODR processes. Evidently, asynchronous text-based processes dominate the current landscape of private ODR and public JODR systems, including systems that offer a hearing stage.¹⁴⁹

6. Implications for Choosing a Medium of Communication

Asynchronous JODR systems can provide hearings via asynchronous text, video, or audio. The choice of a specific communication medium has bearing on the ability of the JODR system to reach its goals. Current JODR (and ODR) services are predominantly text-based,¹⁵⁰ although several JODR systems include a video or audio component.¹⁵¹ Like other process design choices,¹⁵² the specific online communication

Communication Bias in Diverse Groups, 70 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 199 (1997) (showing that social status cues are less salient in computer-mediated than face-to-face communication).

¹⁴⁷ See Bollen & Euwema, *supra* note 121, at 313–15 (demonstrating this effect in labor e-mediations).

¹⁴⁸ JULIE DONA ET AL., VIDEOCONFERENCING IN REMOVAL PROCEEDINGS: A CASE STUDY OF THE CHICAGO IMMIGRATION COURT, 37, 45–6 (Aug. 2, 2005), http://chicagoappleseed.org/wp-content/uploads/2012/08/videoconfreport_080205.pdf.

¹⁴⁹ See Sela, *supra* note 5; Noam Ebner & Jeff Thompson, *@Face Value? Nonverbal Communication & Trust Development in Online Video-based Mediation*, 1 INT’L J. ONLINE DISP. RESOL. (2014); see also Section II.

¹⁵⁰ See Sela, *supra* note 5.

¹⁵¹ See Section II.

¹⁵² See Cohen, *supra* note 115, at 79–80; Smith & Martinez, *supra* note 114, at 128.

medium is expected to impact all parties involved in the judicial proceeding.¹⁵³ To conceptualize the idea that the online space shapes parties' interaction and the manner in which the process is delivered, Katsh and Rifkin coined the term "The Fourth Party."¹⁵⁴ It suggests that the functions built into an ODR system, the communication medium, and the website's appearance and arrangement structure what is (and what is not) possible and likely to occur.¹⁵⁵ Thus, JODR technology system design choices are not neutral; they reflect—and promote—particular values that affect their users.¹⁵⁶ Making informed design decisions requires obtaining data on the effect of different communication media on SRLs, their adversaries, and courts. The following section contributes to this important discourse. It describes and reports the results of an experiment examining the effect of using asynchronous text and video communication on SRLs' procedural justice experiences in JODR.

IV. THE EFFECT OF JODR ON PROCEDURAL JUSTICE EXPERIENCES

To date, very little is known about the effect of different ODR system designs on human interaction and the experiences of relevant stakeholders.¹⁵⁷ The reported experiment was motivated by the desire to study the subjective process experiences of SRLs in JODR, reflecting the idea

¹⁵³ See also Leah Wing & Daniel Rainey, *Online Dispute Resolution and the Development of Theory*, in ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE 23, 26 (Mohamed S. Abdel Wahab et al. eds., 2012) ("[T]he dilemmas that ODR disputants and practitioners face . . . are likely to emerge from the impact of technology on party interaction and their conflict-related communications."); cf. van Veenen, *supra* note 60 (reviewing potential advantages to conducting dispute resolution communications online).

¹⁵⁴ ETHAN KATSH & JANET RIFKIN, ONLINE DISPUTE RESOLUTION: RESOLVING CONFLICTS IN CYBERSPACE 93–94 (2001).

¹⁵⁵ *Id.* at 33.

¹⁵⁶ The fourth party is a particular case of a larger socio-techno-legal phenomenon famously termed "code is law," which suggests that law is embedded in the software code of virtual environments and, thus, code can be systematically used either to protect or erode our fundamental values. See LAWRENCE LESSIG, CODE: AND OTHER LAWS OF CYBERSPACE 6 (1999); see also David A. 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) ("When parties are asked to choose an option . . . how are those options determined? If . . . 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 . . .?"); see Orna Rabinovich-Einy, *Technology's Impact: The Quest for a New Paradigm for Accountability in Mediation* 11 HARV. NEGOT. L. REV. 253, 274–76 (2006); Orna Rabinovich-Einy & Ethan Katsh, *Lessons from Online Dispute Resolution for Dispute System Design*, in ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE 39, 50–52 (Mohamed S. Abdel Wahab et al. eds., 2012) 39, 50–52.

¹⁵⁷ See also Philippe Gilliéron, *From Face-to-Face to Screen-to-Screen: Real Hope or True Fallacy?*, 23 OHIO ST. J. ON DISP. RESOL. 301, 325–26 (2008) ("Considering the amount of literature published by legal scholars about ODR, it is quite surprising to notice that few authors have dealt with . . . the issue of human interaction While the legal issues can easily be grasped and analyzed, it is much more difficult to understand how ODR proceedings are perceived by the stakeholders").

that “[a]ccess to justice is not just a formal concept; it relates also to . . . the pro se litigant’s experience during the process.”¹⁵⁸ The results can inform the design of JODR systems that improve SRLs’ access to and participation in judicial processes, rather than replicate or create undesirable dynamics and outcomes.¹⁵⁹ To that end, the experiment compares how SRLs’ subjective procedural justice experiences in a JODR process differ when they use text-based or video-based asynchronous communication with the judge. An experiment is the desirable methodology to study this issue because it allows manipulating the JODR process to measure the specific effects of these communication media while holding constant potential confounding factors.¹⁶⁰ Indeed, experiments are commonly used in procedural justice research and they are increasingly used in the study of ODR,¹⁶¹ as concerns for external validity and realism in these contexts are largely mitigated.¹⁶²

A. *Experiment Design and Procedure*

1. Overview

The experiment was conducted at Stanford University using a design that was tailored to preserve internal and external validity for participating students. Subjects were told that the Stanford Office of Judicial Affairs (SOJA)¹⁶³ is considering using a new online platform—Online

¹⁵⁸ Zimerman & Tyler, *supra* note 19, at 480.

¹⁵⁹ Orna Rabinovich-Einy & Ethan Katsh, *Technology and the Future of Dispute Systems Design*, 17 HARV. NEGOT. L. REV. 151, 197 (2012) (“Technology can subject stakeholders to power, not only empower them.”). On the importance of taking all stakeholder perspectives into account in the design of dispute resolution processes, see Smith & Martinez, *supra* note 114; Lisa B. Bingham, *Control Over Dispute-System Design and Mandatory Commercial Arbitration*, 67 LAW & CONTEMP. PROBS. 221 (2004).

¹⁶⁰ Potential confounding factors include material differences in parties, case details, outcome, judicial performance, context and settings. See James A. Wall & Timothy C. Dunne, *State of the Art – Mediation Research: A Current Review*, 28 NEG. J. 217, 229, 239–40 (2012) (explaining that field studies of dispute resolution processes are “difficult, time consuming, and expensive” and that “understandably, few disputants and mediators are even willing to allow researchers to ‘sit in’ on their mediations” and suggesting that “theory building can be complemented with laboratory studies”).

¹⁶¹ See, e.g., Brooke Abrahams, Emilia Bellucci & John Zeleznikow, *Incorporating Fairness into Development of an Integrated Multi-agent Online Dispute Resolution Environment*, 21 GROUP DECISION & NEGOT. 3, 25–26 (2012); Gramatikov, *supra* note 89, at 7.

¹⁶² Experiments are a standard methodology in procedural justice research, and their effects have generally been replicated in field studies. See Robert MacCoun, *Voice, Control, and Belonging: The Double-Edged Sword of Procedural Fairness*, 1 ANN. REV. L. & SOC. SCI. 171, 171 (2005). The interface and setting of the online experimental environment exhibit close verisimilitude to those of real JODR environments (participation via personal computer in non-laboratory settings).

¹⁶³ Shortly before the experiment was run, SOJA changed its name to the “Office of Community Standards.” Its core dispute resolution processes are still named “Judicial Process” and “Early Resolution Process.” See *Office of Community Standards*, STANFORD UNIV., <http://communitystandards.stanford.edu> (last visited Feb. 1, 2017).

Early Resolution Program (OERP)—to handle cases of students charged with violations of the University Honor Code. They were asked to play the role of a student resolving a case on OERP in order to test the system and provide feedback. The role of the university Judicial Officer (JO) was construed similarly to that of an ALJ;¹⁶⁴ and the role of the university professor initiating the process was akin to a governmental agency in administrative hearings—physically absent from the proceedings held in front of the ALJ.¹⁶⁵ The experimental design is discussed in greater detail below.

2. Independent Variables

The experiment follows a 2x2 factorial design, as summarized in Table 1. The two independent variables define the medium of communication used by the subject (SRL) and the JO (judge) in the hearing phase of the process. The two independent variables—the SRL’s medium of communication and the judge’s medium of communication—are each operationalized into two levels: a video-based messaging interface and a text-based messaging interface. Accordingly, each of the four treatment groups represents a different system design of the OERP JODR process that includes a hearing stage in which the judge and SRL use different combinations of video and text messaging interfaces.

TABLE 1: SUMMARY OF FACTORIAL DESIGN

	Self-Represented Litigant: Text	Self-Represented Litigant: Video
Judicial Officer: Text	SRL: Text JO: Text	SRL: Video JO: Text
Judicial Officer: Video	SRL: Text JO: Video	SRL: Video JO: Video

3. Dependent Variables

The experiment was designed to capture the main effect and interaction of the independent variables on SRLs’ perceptions of procedural justice, their performance and that of the judge and of the JODR system. The term “procedural justice” encapsulates the idea of fairness in the processes by which decisions are made. It is the most well-established evaluation criterion of dispute resolution processes and justice sys-

¹⁶⁴ See *supra* note 7.

¹⁶⁵ Despite the differences between a university judicial process of a disciplinary nature and an administrative hearing, placing the experiment in a familiar context was an important means to encourage subjects’ authentic and committed participation.

tems,¹⁶⁶ transcending differences in method, context, goals, and technology,¹⁶⁷ consistently replicated across cultures, settings, and research methodologies.¹⁶⁸ Procedural justice is widely understood as comprised of four dimensions: (a) *process control* (control over the opportunity to present evidence); (b) *decision control* (control over the final outcome);¹⁶⁹ (c) *interactional justice* (the decision maker's treatment of a person with politeness, dignity and respect); and (d) *informational justice* (the availability of information and explanations about the process and its justification).¹⁷⁰ Since indicators for these dimensions are context-sensitive, "ad-hoc measures are given deference because they allow questions to be tailored to the varied situations in which justice has been examined."¹⁷¹

Drawing on instruments suggested in prior studies,¹⁷² the post-experimental questionnaire captured SRLs' self-reported procedural exper-

¹⁶⁶ Notable contributions include Gerald S. Leventhal, Jurgis Karuza Jr. & William R. Fry, *Beyond Fairness: A Theory of Allocation Preferences*, in JUSTICE AND SOCIAL INTERACTION: EXPERIMENTAL AND THEORETICAL CONTRIBUTIONS FROM PSYCHOLOGICAL RESEARCH 167, 195–96 (Gerald Mikula ed., 1980) (proposing six rules for evaluating procedures: consistency of treatment, bias suppression, accuracy of information collection, correctability of decisions, representation of affected parties, and ethicality (accordance with general standards of fairness and morality)), and the prolific work of Tyler & Lind, including Tom R. Tyler & E. Allan Lind, *A Relational Model of Authority in Groups*, 25 ADVANCES EXPERIMENTAL SOC. PSYCHOL. 115 (1992) (proposing the *relational model* of procedural fairness, comprised of the perception that authorities are trustworthy and benevolent in attempting to be fair; that one is accorded unbiased and consistent treatment, and that one's interpersonal treatment is polite, respectful of one's rights and opinions, and conveys dignity); TOM R. TYLER & STEPHEN L. BLADER, COOPERATION IN GROUPS: PROCEDURAL JUSTICE, SOCIAL IDENTITY, AND BEHAVIORAL ENGAGEMENT (2000) (advocating a similar framework under two dimensions).

¹⁶⁷ See also Tom R. Tyler, *The Quality of Dispute Resolution Procedures and Outcomes: Measurement Problems and Possibilities*, 66 DENV. U. L. REV. 419, 422 (1989); Thomas D. Halket, *Improving Arbitration through Technology: A Quest for Basic Principles*, 62 DISP. RESOL. J. 54, 56 (2007).

¹⁶⁸ See MacCoun, *supra* note 162, at 171 (noting that procedural justice effects have "been replicated [using] a wide range of methodologies (including panel surveys, psychometric work, and experimentation), cultures (throughout North America, Europe, and Asia), and settings (including tort litigation, policing, taxpayer compliance, support for public policies, and organizational citizenship)"). But see Joel Brockner et al., *Culture and Procedural Justice: The Influence of Power Distance on Reactions to Voice*, 37 J. EXPERIMENTAL SOC. PSYCHOL. 300 (2001) (discussing that the various dimensions of procedural justice, however, may carry a different weight depending on context and culture).

¹⁶⁹ Dimensions a) and b) were first proposed in JOHN THIBAUT & LAURENS WALKER, PROCEDURAL JUSTICE (1975).

¹⁷⁰ Dimensions c) and d) were outlined in Jason A. Colquitt, *On the Dimensionality of Organizational Justice: A Construct Validation of a Measure*, 86 J. APPLIED PSYCHOL. 386 (2001).

¹⁷¹ Neil M.A. Hauenstein, Tim McGonigle & Sharon W. Flinder, *A Meta-Analysis of the Relationship Between Procedural Justice and Distributive Justice: Implications for Justice Research*, 13 EMP. RESP. & RTS. J. 39, 42 (2001); see also Jerald Greenberg, *Organizational Justice: Yesterday, Today and Tomorrow*, 16 J. MGMT. 399 (1990).

¹⁷² See, e.g., Rebecca Hollander-Blumoff & Tom R. Tyler, *Procedural Justice in Negotiation: Procedural Fairness, Outcome Acceptance, and Integrative Potential*, 33(2) LAW &

iences using the following items: (a) *Procedural Justice*: process fairness, voice/participation, process control, decision control, bias suppression, and accuracy; (b) *Interactional Justice*: the judge's attentiveness, respectfulness, and trustworthiness; and (c) *Informational Justice*: explanation of process and clarity. The questionnaire included standardized questions with a seven-point response scale, using multiple indicators per each dimension. After responses were obtained, indicators were aggregated into indices (composite measures) based on theory and factor analysis. Table 2 summarizes the concepts, dimensions, and indicators in the instrument.¹⁷³

SOC. INQUIRY 473 (2008); E. Allan Lind et al., *In the Eye of the Beholder: Tort Litigants' Evaluations of Their Experiences in the Civil Justice System*, 24 LAW & SOC. REV. 953 (1990); E. ALLAN LIND & TOM R. TYLER, *THE SOCIAL PSYCHOLOGY OF PROCEDURAL JUSTICE* (1988); Tom R. Tyler, *What Is Procedural Justice?: Criteria Used by Citizens to Assess the Fairness of Legal Procedures*, 22 LAW & SOC. REV. 103, 128 (1988); see also MARTIN GRAMATIKOV ET AL., *A HANDBOOK FOR MEASURING THE COSTS & QUALITY OF ACCESS TO JUSTICE* (2010); Martin Gramatikov, Malini Laxminarayan & Maurits Barendrecht, *Assessment of the Validity and Reliability of a Methodology for Measuring the Costs and Quality of Access to Justice* (TISCO Working Paper Series on Civil Law & Conflict Resolution Sys. No. 003/2010, 2010); Colquitt, *supra* note 170, at 389; Leventhal et al., *supra* note 166.

¹⁷³ See *infra* Table 8 in the Appendix for the results of the factor analyses.

TABLE 2: PROCEDURAL JUSTICE MEASUREMENT INSTRUMENT

Concept	Dimension	Indicator
Procedural Justice	Process Fairness	Agree/Disagree: Process was fair
		To what degree: Process was neutral
		To what degree: Process was fair
	Voice/Participation	Agree/Disagree: Able to express views
		Agree/Disagree: Allowed to present one's side of story
	Process Control	Agree/Disagree: My views were considered in the process
		To what degree: I had control over the process
	Decision Control	Agree/Disagree: My needs were considered in the outcome
		To what degree: Information I provided was considered in the outcome: None—A lot
	Bias Suppression	Agree/Disagree: Treatment was influenced by my race, sex, age, nationality or other characteristics
Accuracy	Information collected was: Accurate—Inaccurate	
Interactional Justice	Judicial Officer Attentiveness	JO was: Attentive—Not attentive
		Agree/Disagree: JO was attentive to my views
	Judicial Officer Respectfulness	JO was: Respectful—Disrespectful
		Agree/Disagree: JO treated me with respect
	Judicial Officer Trustworthiness	Agree/Disagree: JO was trustworthy
		JO was: Untrustworthy—Trustworthy
Informational Justice	Explanation of Process	JO explained process: Not at all—Fully
	Neutral Clarity	JO was: Clear—Confusing

Given the specific interest in a JODR system as a means to alleviate the problems associated with SRLs, the post-experimental questionnaire captured additional procedural evaluations, which are summarized in Table 3. First, to provide a richer understanding of SRLs' ability to effectively participate in the process and capture their experience of process dynamics, the questionnaire measured the degree to which subjects ex-

perienced negative emotions,¹⁷⁴ empowerment, and satisfaction¹⁷⁵ with the process, and whether they felt “heard.” Second, to explore SRLs’ interaction with judges, subjects were asked about their impression of the judge’s fairness, effectiveness, and empathy. Finally, in order to explore the potential of different JODR system designs to improve the operation of judicial processes, subjects were asked about the effectiveness and efficiency of the OERP system and how it compares to (their idea of) an in-person process.

¹⁷⁴ For a discussion of the relationship between perceptions of procedural fairness and positive and negative emotions, see Karen A. Hegtvedt & Caitlin Killian, *Fairness and Emotions: Reactions to the Process and Outcomes of Negotiations*, 78 SOC. FORCES 269 (1999) (finding that parties who regarded the process as fair were more likely to feel pleased about how it went and less likely to express negative feelings such as agitation, anger, and resentment after the negotiation).

¹⁷⁵ Research shows that “fairness judgments do not always show the same effects as do satisfaction judgments, indicating differences in the way people form judgments on these two dimensions.” Kees van den Bos et al., *Evaluating Outcomes by Means of the Fair Process Effect: Evidence for Different Processes in Fairness and Satisfaction Judgments*, 74 J. PERSONALITY & SOC. PSYCHOL. 1493, 1493 (1998).

TABLE 3: SUPPLEMENTAL PROCEDURAL EVALUATION CRITERIA

Concept	Dimension	Indicator
JO Performance	JO Fairness	JO was: Fair—Unfair
		JO was: Neutral—Not Neutral
	JO Competence	JO was: Competent—Incompetent
		JO performance: Satisfied—Not satisfied
		JO overall impression: Positive—Negative
	JO Engagement	JO was: Involved—Indifferent
JO was: Empathetic—Not empathetic		
SRL Experience	Negative Affect	Agree/Disagree: Experienced frustration during process
		Agree/Disagree: Experienced anger during process
		Process was: Not stressful—Stressful
		I felt in the process: Hopeless—Hopeful
	Empowerment (Self-Efficacy)	Process effect on self-image: Positive—Negative
		Process effect on competency resolving similar situations: Positive—Negative
	Satisfaction	Process: Satisfied—Unsatisfied
		Process overall impression: Positive—Negative
	Feeling “Heard”	Agree/Disagree: I felt the JO understood my statements
		The JO was Empathetic—Not Empathetic
		The JO was: Involved—Indifferent
	Process Evaluation	Process Overall Impression
Overall OERP system is: Bad—Good		
Recommend friends to use process: Yes—No		
Recommend University to adopt OERP: Yes—No		
ODR compared to in-person hearing		OERP compared to F2F is: Worse—Better
		OERP compared to F2F is: Ineffective—Effective
ODR System Performances	Interface Evaluation	Messaging Interface was: Convenient—Inconvenient
		Messaging Interface was: Effective—Ineffective
		Messaging Interface was: Appropriate—Inappropriate

4. Developing Hypotheses

The hypotheses define the effect that each of the four JODR hearing process designs (interacting with a judge via asynchronous video or text) is expected to have on SRLs' procedural justice perceptions. They distinguish between the medium SRLs use to *send* messages and the medium they use to *receive* messages from the judge. The literature suggests that SRLs' procedural justice experiences would be significantly shaped by their ability to "tell their story" and feel it was appropriately considered (exerting process-control and decision-control); their sense that the judge was attentive and respectful to them (interactional justice); and the availability of information in the process (informational justice)—attributes that are tightly connected to the medium of communication.¹⁷⁶ As mentioned earlier, currently, the majority of ODR and JODR systems are based on two-way textual communication. In contrast, the literature on computer-mediated communication (CMC) traditionally predicts a preference for the richer two-way video communication. However, for the reasons detailed below, the experiment predicts that in the context of the OERP JODR process, SRLs would prefer a hearing process in which they send messages in text form and receive messages from the judge in video form.

CMC literature has traditionally evaluated online interaction against the bench-mark of face-to-face interaction, emphasizing the fact that human communication depends on both words and non-verbal cues, and that online environments are limited in their ability to deliver the latter.¹⁷⁷ Non-verbal cues are important because they serve as a social context variable that contributes to people's ability to regulate social interaction and interpret what their interactional counterparts *intended* their words to mean.¹⁷⁸ This line of research has generally been used to

¹⁷⁶ Tyler & Lind explain that interactional indicators, which are clearly affected by the medium of communication, serve as fairness heuristics for the overall complex judgment of procedural justice, acting as "social signs and symbols that people are comfortable interpreting . . . a workable solution to some difficult problems." Tom R. Tyler & E. Allan Lind, *Procedural Justice*, in HANDBOOK OF JUSTICE RESEARCH IN LAW 80–81 (Joseph Sanders & Lee V. Hamilton eds., 2001). Heuristics are especially powerful when people are self-represented and have little knowledge or experience of the proceedings they take part in, a typical situation in many JODR processes. See Kees van den Bos, *Fairness Heuristic Theory: Assessing the Information to Which People Are Reacting Has a Pivotal Role in Understanding Organizational Justice*, in THEORETICAL AND CULTURAL PERSPECTIVES ON ORGANIZATIONAL JUSTICE 70–71 (Stephen W. Gilliland et al. eds., 2001).

¹⁷⁷ See Mary J. Culnan & M. Lynne Markus, *Information Technology*, in HANDBOOK OF ORGANIZATIONAL COMMUNICATION: AN INTERDISCIPLINARY PERSPECTIVE 420 (Fredric M. Jablin et al., eds.) (1987) (discussing the "cues filtered out" effect in online communication and its implications for social interaction, forming impressions and perceptions, and understanding and assessing the social context, content, and truthfulness in communications).

¹⁷⁸ See *id.*; Robert M. Krauss & Ezequiel Morsella, *Communication and Conflict*, in THE HANDBOOK OF CONFLICT RESOLUTION: THEORY AND PRACTICE 146–48 (Morton Deutsch &

argue that people are likely to find online communication less suitable for nuanced tasks such as dispute resolution;¹⁷⁹ and that if a communication medium must be used, video communication would be most appropriate, since it most resembles face-to-face interaction.¹⁸⁰

Two principal theories dominate this literature. Media Richness Theory (MRT) defines the richness of a given medium by looking at its ability to support language variety, multiplicity of cues, personalization and rapid feedback.¹⁸¹ According to MRT, tasks that involve ambiguity, high interdependence, and socio-emotional content are better served by rich media (e.g. video) than lean media (e.g. email).¹⁸² Social Presence Theory (SPT) shifts the focus from the medium to its users but yields similar predictions. It looks at the way people experience themselves and make sense of social interactions: how they perceive information, make attributions about others, and deem certain behaviors appropriate.¹⁸³ According to SPT, textual communication is less favorable than video interaction because it is likely to constrain people's ability to create social

Peter T. Coleman eds., 2006); *see also* Kathleen L. McGinn & Rachel Croson, *What Do Communication Media Mean for Negotiators? A Question of Social Awareness*, in *THE HANDBOOK OF NEGOTIATION AND CULTURE* 334, 334 (Michele J. Gelfand & Jeanne M. Brett eds., 2004); Laura Klaming, Jelle van Veenen & Ronald Leenes, *I Want the Opposite of What You Want: Reducing Fixed-pie Perceptions in Online Negotiations*, *J. DISP. RESOL.* 139 (2009).

¹⁷⁹ *See* Robert C. Bordone, *Electronic Online Dispute Resolution: A Systems Approach – Potential Problems, and A Proposal*, 3 *HARV. NEGOT. L. REV.* 175, 180–81 (1998) (discussing negative effects of using constrained computer-mediated communication to deliver “difficult” or “uncomfortable” information on conflict management); Eisen, *supra* note 61.

¹⁸⁰ Some scholars further advocate holography as the next best technology for ODR. *See* Susan N. Exon, *The Next Generation of Online Dispute Resolution: The Significance of Holography to Enhance and Transform Dispute Resolution*, 12 *CARDOZO J. CONFLICT RESOL.* 19, 20–21 (2011).

¹⁸¹ *See generally* Richard L. Daft & Robert H. Lengel, *Information Richness: A New Approach to Managerial Behavior and Organizational Design*, 6 *RES. ORGANIZATIONAL BEHAV.* 191 (1984) (proposing that four parameters define rich media, rendering it better suited for complex tasks: *language variety*: the ability to convey natural language rather than just numeric information; *multiplicity of cues*: the number of ways in which information can be communicated; *personalization*: the ability to personalize the message; and *rapid feedback*: the ability to respond to the communicator in real (or near-real) time).

¹⁸² In equivocal situations, information can be interpreted in more than one way. Since it is typically unclear what specific type of data is required to reduce equivocality, rich media will likely be better suited to support the task at hand. *See* Alan R. Dennis & Joseph S. Valacich, *Rethinking Media Richness: Towards a Theory of Media Synchronicity*, 32 *HAW. INT'L CONF. ON SYS. SCI.* 1, 1–2 (1999).

¹⁸³ *See* Joseph B. Walther, *Computer-Mediated Communication: Impersonal, Interpersonal and Hyperpersonal Interaction*, 23 *COMM. RES.* 3, 5 (1996); Guoqiang Cui, Barbara Locke & Cuiqing Meng, *Building Modern Online Social Presence: A Review of Social Presence Theory and Its Instructional Design Implications for Future Trends*, 18 *EDUC. & INF. TECH.* 661, 663 (2013); Jennifer C. Richardson & Karen Swan, *Examining Social Presence in Online Courses in Relation to Students' Perceived Learning and Satisfaction*, 7 *J. ASYNCHRONOUS LEARNING NETWORKS* 68, 70 (2003); Chih-Hsiung Tu, *On-Line Learning Migration: From Social Learning Theory to Social Presence Theory in a CMC Environment*, 23 *J. NETWORK & COMPUTER APPLICATIONS* 27, 27–28 (2000).

presence—project themselves, perceive others, and sense that they are perceived by others.¹⁸⁴ Empirical studies confirm that compared to textual communication, video interaction is more conducive to developing rapport, creating a sense of being treated attentively and respectfully, fostering impressions of credibility and competence, and generating trust.¹⁸⁵

MRT and SPT suggest, therefore, that SRLs would favor a JODR process that is based on two-way video communication over a process based on textual communication.

However, a growing body of research suggests that in some cases, diminished media richness and social presence may be advantageous, such that the benefits of textual communication outweigh its deficiencies. Some aspects of this literature appear particularly relevant to the experience of SRLs. First, evidence suggests that “with tasks of very high intimacy—perhaps very embarrassing, personal or conflictual ones—the least immediate medium . . . would lead to more favorable evaluations than . . . more immediate media.”¹⁸⁶ Second, research shows that text-based communication may better mitigate the undesirable “silencing” effect SRLs experience in judicial proceedings.¹⁸⁷ Furthermore, leaner media were found to encourage lower-status individuals to participate more¹⁸⁸ and reduce social influence bias among communicators.¹⁸⁹ Thus, using textual communication may *improve* SRLs’ ability to “tell their

¹⁸⁴ See Patrick R. Lowenthal, *The Evolution and Influence of Social Presence Theory on Online Learning*, in ONLINE EDUCATION AND ADULT LEARNING: NEW FRONTIERS FOR TEACHING PRACTICES 129–31 (Terry T. Kidd ed., 2010).

¹⁸⁵ See, e.g., Nathan Bos et al., *Effects of Four Computer-Mediated Communications Channels on Trust Development*, 2002 SPECIAL INT. GROUP ON COMPUTER HUM. INTERACTION CONF. ON HUM. FACTORS COMPUTING SYS. 135, 139 (2002); Ebner & Thompson, *supra* note 149 (summarizing the literature on the types of cues conveyed via video (and not text) communication, which foster rapport, trust, immediacy, empathy, credibility, competence and connectedness, such as body orientation, facial expression, and tone). While studies of video communication are typically based on synchronous communication, if the asynchronicity of the JODR process is held constant, its cited benefits over textual communication likely persist, as it continues to convey non-verbal cues such as body orientation, smiling, head nodding, directional gaze, and facially expressive gestures which are all linked with rapport building. See PETER A. ANDERSEN, NONVERBAL COMMUNICATION: FORMS AND FUNCTIONS 193–206 (2008).

¹⁸⁶ Ederyn Williams, *Medium or Message: Communications Medium as a Determinant of Interpersonal Evaluation*, 38 SOCIOMETRY 119, 128 (1975) (comparing interaction by face-to-face, closed-circuit television, and telephone).

¹⁸⁷ See *supra* Section I. Because lean media convey fewer social context cues, they reduce the salience of social group differences and social status, and the power schema associated with them. See Lee Sproull & Sara Keisler, *Reducing Social Context Cues: Electronic Mail in Organizational Communication*, 32 MGMT. SCI. 1492 (1986).

¹⁸⁸ Jane Siegel et al., *Group Processes in Computer-Mediated Communication*, 37 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 157, 160, 179 (1986).

¹⁸⁹ Anita D. Bhappu, Terri L. Griffith & Gregory B. Northcraft, *Media Effects and Communication Bias in Diverse Groups*, 70 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 199, 204 (1997).

story” and diminish the risk that judges would discount or ignore the information and arguments SRLs provide, such that “even though less nuanced information is communicated . . . more diverse information may actually be received.”¹⁹⁰

A third argument supporting a JODR system design in which SRLs use textual communication is that leaner media can increase SRLs’ ability to present their case clearly and effectively, thus improving their sense of participation and of being “heard.” Studies found that using lean media leads people to focus more on the content of their messages.¹⁹¹ Moreover, since lean media does not convey non-verbal cues such as facial expressions, body language, and tone of voice, it leads people to use more rational-analytical communication tactics (such as logical argumentation and presentation of facts) and lower their reliance on intuitive-experiential communication tactics (like appeals to emotion, the presentation of concrete personal stories, and the use of metaphors).¹⁹² Accordingly, SRLs may feel that textual communication is a preferable means for presenting arguments that judges are inclined to consider. Unlike SRLs, judges are experts in gleaning and interpreting relevant information, and thus seem adept at interpreting textual messages that contain reduced context and nuance.

In conclusion, in the specific context of an asynchronous JODR system for SRLs, the literature on CMC and procedural justice provides convincing arguments for deviating from the prevalent ODR and JODR system design that relies on two-way textual communication, as well as from the traditional preference in CMC literature for the richer two-way video communication. Specifically, it is hypothesized that SRLs would report more positive procedural justice experiences in a JODR process in which judges communicate via video messages and SRLs communicate via text format.¹⁹³

5. Experimental Procedure

The study was conducted as an online study at Stanford University, completed by eighty-four native English-speaking students, seventy-two

¹⁹⁰ Barsness & Bhappu, *supra* note 144, at 357.

¹⁹¹ Ocker & Yaverbaum, *supra* note 146.

¹⁹² See Barsness & Bhappu, *supra* note 144, at 366–67; Michele J. Gelfand & Naomi Dyer, *A Cultural Perspective on Negotiation: Progress, Pitfalls, and Prospects*, 49 APPLIED PSYCHOL.: INT’L REV. 62, 89 (2000).

¹⁹³ Evaluations of process design, procedural justice, and communication media are sensitive to context and setting. Thus, the hypotheses apply to the specific characteristics of the OERP process. See M. Ethan Katsh, *Dispute Resolution in Cyberspace*, 28 CONN. L. REV. 953, 974 (1996); Edith Barrett-Howard & Tom R. Tyler, *Procedural Justice as a Criterion in Allocation Decisions*, 50 J. PERSONALITY & SOC. PSYCHOL. 296, 299 (1986); Gramatikov, *supra* note 89, at 7.

undergraduate and twelve graduate students,¹⁹⁴ who participated to receive credit for class research requirements.¹⁹⁵ Subjects received an email invitation to participate in a pilot-study of OERP, explaining that SOJA is testing the system and is seeking student feedback. Participants were asked to play the role of a student resolving a plagiarism case on OERP and complete a questionnaire about their experience. After signing up, participants received an email containing their OERP username and password, and a link to the study website, where they reviewed the experiment instructions and a “fact sheet” laying out the particulars of the disputed incident from the student’s perspective.¹⁹⁶ Participants were then directed to a separate OERP website, where they were randomly assigned to one of the four treatments (determining whether during the hearing stage they would receive/send video or text messages from/to the JO). Upon completion of the OERP process, subjects responded to an online questionnaire.

The OERP JODR system was modeled after an equivalent in-person process that SOJA runs to resolve Honor Code violations¹⁹⁷ and it was designed to enable SRLs to complete the process along the lines of the framework described in Part III. It simulated a JODR system in which SRLs can prepare for hearings by educating themselves about the process and norms governing their particular case, and remotely participate in all hearings in a system that supports their effective participation.¹⁹⁸ Subjects accessed OERP using their personal computers in a location of their

¹⁹⁴ Subjects’ mean age was 20.1 years (the median age was 20). Due to class composition, the subject population included 56 females and 28 males. (No significant differences were found based on gender, age or career. The potential unique effect that command of language may have on levels of comfort using text and video communication was eliminated.)

¹⁹⁵ The sample size is comparable with other similar experiments. *See, e.g.*, Klaming et al., *supra* note 178, at 144–45 (reporting dividing eighty-four student-participants in an online negotiation experiment into six treatment groups of fourteen subjects each). A relatively small experimental sample size is useful in producing a conservative test of a hypothesis. *See* Matt Wilkerson & Mary R. Olson, *Misconceptions about Sample Size, Statistical Significance, and Treatment Effect*, 131 J. PSYCHOL. 627 (1997) (explaining that a small sample requires a greater treatment effect than a large sample to obtain an equal level of statistical significance); *see also* David Bakan, *The Test of Significance in Psychological Research*, 66 PSYCHOL. BULL. 423, 429 (1966) (“The rejection of the null hypothesis when the number of cases is small speaks for a more dramatic effect in the population; and if the *p* value is the same, the probability of committing a Type I error remains the same. Thus one can be more confident with a small [sample size] than a large [one].”).

¹⁹⁶ Pre-tests confirmed that the fact sheet enabled subjects to present the JO with rich statements including facts and mitigating circumstances pertaining to the incident. (It included information about the student’s personal history, procedural preferences with respect to the judicial process, and general information about the OERP process and the role of the JO.)

¹⁹⁷ *See Early Resolution Option*, STANFORD UNIV., <https://communitystandards.stanford.edu/student-conduct-process/early-resolution-option> (last visited Feb. 1, 2017).

¹⁹⁸ After logging in to the system, subjects viewed their Judicial Affairs case number, alleged violation (plagiarism), and name of the complainant professor. They moved through

convenience.¹⁹⁹ The process included five message exchanges: three messages by the JO and two messages by the participant-SRL. Depending on treatment, messages were composed and reviewed via either a text-editor/viewer or a video-recorder/player embedded in the OERP website.²⁰⁰ Subjects were required to respond to each of the JO's messages within twenty-four hours, and vice versa,²⁰¹ such that they completed the process over a period of three to five days. All information, including messages by the JO, was standardized across treatments.²⁰² Post-experimental manipulation checks confirmed that participants believed they were testing a real system and interacting with a JO.²⁰³

B. Results and Analysis

1. Principal Findings

The results are consistent with the principal prediction that SRLs would experience greater levels of procedural justice in an asynchronous JODR process design in which they *send textual messages* to the judge and *receive video messages* from the judge compared to the other tested designs. A two-way analysis of variance (ANOVA) confirmed that subjects-SRLs reported more positive procedural experiences when they received video communications from the judge. Post hoc analyses of significant interactions confirmed two types of significant main effects: first, when the judge sent video messages, SRLs had better procedural

several web pages briefly and clearly introducing OERP, explaining each procedural stage, and reviewing the rules that govern the process, their rights and their responsibilities.

¹⁹⁹ Two participants reported technical problems with the web-camera installed on their personal computer and completed the experiment in a residential computer cluster.

²⁰⁰ The OERP hearing process consisted of six stages: (a) review of a written complaint statement filed by the Professor; (b) JO's presentation of the OERP process and the incident as reported by the complainant; (c) Student's "statement of facts," telling their side of the story; (d) JO's factual determination about the nature of the incident and review of applicable Honor Code rules and precedence; (e) Student's "sanctioning statement," detailing special considerations and mitigating circumstances; (f) JO's final decision. Relevant elements were adapted to reflect differences in media (text or video) based on treatment.

²⁰¹ Students received email notifications when a JO message was sent. The experiment started on a Monday, and JO messages were programmed to be automatically sent during business hours, within no more than 12 hours of the transmission of the subject's message.

²⁰² To overcome the lack of visual information about the JO in text treatments, a photo and a short biographical paragraph about the JO were shown to all participants prior to the hearing. See generally Don A. Moore et al., *Long and Short Routes to Success in Electronically-Mediated Negotiations: Group Affiliations and Good Vibrations*, 77 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 22 (1999) (asserting that such information improves rapport and collaboration in email negotiations); see also McGinn & Croson, *supra* note 178, at 336, 343 (claiming such information reduces the cognitive and emotional load required for attending to an unknown other).

²⁰³ Moreover, participants appeared very engaged with the OERP; over 70% of them voluntarily provided comments and proposals for improving the system after completing the study.

experiences if they communicated via textual messages, and second, when SRLs sent textual messages, they had better procedural experiences if the judge sent them video messages. Finally, a one-way ANOVA detected significant differences between the four system design media combinations at the hearing stage (JO-Text & SRL-Text, JO-Text & SRL-Video, JO-Video & SRL-Text, and JO-Video & SRL-Video). Consistent with the previous findings, Tukey post hoc analysis showed that the JO-Video & SRL-text process design resulted in significantly more favorable procedural experiences compared to the common *two-way text* design. Moreover, as predicted, the JO-Video & SRL-Text process design made SRLs feel less frustrated, angry, hopeless and stressed compared to the *two-way video* process design (the two designs were not significantly different in other respects). The analyses and detailed results are presented below and summarized in Tables 4 to 7; implications are discussed in the following Section.

2. Analysis and Findings

A two-way ANOVA of the experiment results compared the impact of the communication media used by the JO and SRL (text or video) on SRLs' procedural justice experiences and other procedural measures. The analysis revealed both main effects and interaction effects. Consistent with the hypothesis motivated by MRT and SPT, a main effect was detected such that when the judge communicated via a rich medium (video messages) rather than a lean medium (text messages) subjects-SRLs experienced greater voice, sense of being "heard," and interactional justice, and reported more positive evaluations of the performance of the judge and the effectiveness and appropriateness of the JODR system interface (see Table 4). Subjects who sent video messages reported they perceived the judge—whose conduct was standardized across treatments—as more empathetic and less indifferent to them compared to subjects who sent text messages. No other main effects (absent an interaction) were observed. However, as further explained below, a host of simple main effects were gleaned from the post hoc analyses of the interactions, supporting SRL's hypothesized preference for communicating in text form when the JO uses video interaction, and similarly, for receiving video messages from the JO when they communicate in text form.

TABLE 4: COMMUNICATION MEDIUM MAIN EFFECTS (NO SIGNIFICANT INTERACTION EFFECT)

Concept	Measure	Mean JO Video (SD)	Mean JO Text (SD)	Sig.
Procedural Justice	Participation/Voice	5.90 (.98)	5.26 (1.39)	F(1, 80)=6.041, p=.016
Interactional Justice	JO Attentiveness, Respectfulness, Trustworthiness	6.03 (.81)	5.59 (1.03)	F(1, 80)=5.576, p=.035
Sense of Being Heard	JO Indifference	1.89 (1.20)	5.20 (1.57)	F(1, 80)=8.607, p=.004
JO Evaluation	JO Performance	5.93 (.98)	5.44 (1.18)	F(1, 77)=3.987, p=.049
Interface for Receiving JO Messages	Effectiveness	6.11 (1.06)	5.13 (1.75)	F(1, 79)=10.015, p=.002
Concept	Measure	SRL Video	SRL Text	Sig.
Sense of Being Heard	JO Indifference	1.95 (1.04)	2.71 (1.72)	F(1, 80)=5.682, p=.02
	JO Empathy	5.63 (1.21)	5.00 (1.64)	F(1, 80)=4.0703, p=.047

The principal system design hypothesis guiding the study is that in an asynchronous JODR system SRLs would experience higher levels of procedural justice when they *send* textual communications to the judge and *receive* video communications from the judge. The two-way ANOVA revealed multiple significant interaction effects between the communication media used by the SRL and the judge. Post hoc analyses of these interactions generated a host of simple main effects that support the hypothesized preference for JO-Video & SRL-Text system design over the other tested combinations. They show that when SRLs use textual communication, they report more favorable procedural experiences if the judge uses video rather than text communication. Specifically, when the JO sent video messages SRLs evaluated more positively the fairness of the process, the fairness of the JO, and the appropriateness of the JODR system interface, and they felt less hopeless, stressed, angry and frustrated (reduced negative affect). Additional marginally significant simple main effects follow this trend with respect to process control, decision control, and sense of empowerment (see Table 5 for a summary of the results). Notably, no significant simple main effects were detected with respect to the JO's use of textual communication.

TABLE 5: SIMPLE MAIN EFFECTS OF THE JO'S COMMUNICATION MEDIUM WHEN THE SRL SENDS TEXT MESSAGES (TWO-WAY ANOVA INTERACTION POST-HOC ANALYSIS)

Measure (Interaction Sig.)	JO Video (SD)	JO Text (SD)	Mean Diff.	Simple Main Effect Sig.
Process Fairness ($F(1,76)=7.424, p=0.023$)	6.03 (6.04)	5.13 (1.35)	0.9	$p=0.019$
Negative Affect ($F(1,78)=11.344, p=0.001$)	2.42 (0.92)	3.54 (1.19)	-1.12	$p=0.003$
JO Fairness ($F(1,80)=4.980, p=0.028$)	6.15 (1.07)	5.31 (1.18)	0.84	$p=0.016$
Interface: Appropriate Receiving Messages ($F(1,79)=5.667, p=0.020$)	6.45 (.75)	4.85 (1.78)	1.6	$p=0.0002$
Interface: Appropriate Providing Messages ($F(1,80)=3.523, p=0.064$)	5.75 (1.55)	4.57 (1.72)	1.17	$p=0.019$
Process Control* ($F(1,79)=4.108, p=0.046$)	5.16 (1.31)	4.40 (1.3)	0.75	$p=0.060$
Decision Control* ($F(1,79)=4.882, p=0.03$)	5.18 (1.33)	4.40 (1.68)	0.7	$p=0.080$
Empowerment*ϕ ($F(1,79)=7.570, p=0.007$)	4.94 (1.11)	4.33 (1.09)	0.61	$p=0.088$

*Marginally Significant

ϕ A similar simple main effect was observed when the SRL sent video messages

Consistent with these results and the hypothesized system design preference for a JO-Video & SRL-Text media combination, when the JO sent video messages SRLs' textual communication had a similar significant simple main effect. The results summarized in Table 6 show that SRLs who communicated via text messages experienced reduced negative affect, improved process fairness, and increased sense of empowerment compared to SRLs who sent video messages. No significant simple main effects were detected with respect to SRLs' use of video communication (beyond the main effects reported in Table 4).

TABLE 6: SIMPLE MAIN EFFECTS OF SRLS' COMMUNICATION MEDIUM WHEN THE JO SENDS

Measure (Interaction Sig.)	SRL Text (SD)	SRL Video (SD)	Mean Diff.	Simple Main Effect Sig.
Process Fairness ($F(1,76)=7.424, p=0.023$)	6.03 (6.04)	5.24 (1.08)	0.79	$p=0.034$
Empowerment ($F(1,79)=7.570, p=0.007$)	4.94 (1.11)	4.14 (1.08)	0.8	$p=0.023$
Negative Affect ($F(1,78)=11.344, p=0.001$)	2.42 (0.92)	3.41 (1.20)	0.99	$p=.006$

The principal system design hypothesis of the study was further confirmed by a one-way ANOVA comparing the four media combinations (JO-Text & SRL-Text, JO-Text & SRL-Video, JO-Video & SRL-Text, and JO-Video & SRL-Video). This analysis showed that the JO-Video & SRL-Text system design resulted in significantly more favorable procedural experiences compared to both the two-way text system design (which is the most common design of current ODR and JODR platforms) and the two-way video design (which is preferred by MRT and SPT). Compared to a two-way textual hearing process, subjects-SRLs in the JO-Video & SRL-Text treatment reported that the process was fairer, they had more “voice” (sense of participation), the JODR system interface was more appropriate, the JO was less indifferent to them, and they experienced less negative affect (anger, frustration, hopelessness, and stress). Table 7 summarizes these findings and other marginally significant results supporting this trend. Additionally, compared to the two-way video combination, the JO-Video & SRL-Text media combination resulted in *less* negative affect, thereby supporting the hypothesized preference of SRLs for communicating in text form. The two system designs were not otherwise significantly different. Other treatments also showed no significant differences (except as indicated in the table).

TABLE 7: JO-VIDEO & SRL-TEXT COMPARED TO TWO-WAY TEXT
(ONE-WAY ANOVA)

Measure One-Way ANOVA Sig.	JO-Video & SRL-Text (SD)	JO-Text & SRL-Text (SD)	Mean Diff.	Tukey Post-Hoc Sig.
Process fairness ($F(3,77)=3.589, p=0.017$)	6.25 (0.78)	5.12 (1.44)	1.13	$p=0.018$
Voice (Participation) ($F(3,80)=2.830, p=0.044$)	6.05 (0.93)	5.02 (1.45)	1.02	$p=0.033$
Negative Affect* ($F(3,78)=4.251, p=0.008$)	2.42 (0.92)	3.54 (1.19)	-1.12	$p=0.015$
Interface: Appropriate Receiving Messages ($F(3,79)=4.982, p=0.003$)	6.45 (0.75)	4.85 (1.78)	1.6	$p=0.001$
JO Indifference^ϕ ($F(3,80)=5.378, p=0.002$)	2.10 (1.51)	3.29 (1.73)	-1.19	$p=0.032$
JO Performance^θ ($F(3,77)=2.260, p=0.088$)	6.06 (1.04)	5.21 (1.20)	0.85	$p=0.074$
JO Fairness^θ ($F(3,80)=2.306, p=0.083$)	6.15 (1.07)	5.31 (1.18)	0.84	$p=0.074$
Interactional Justice^θ ($F(3,80)=2.351, p=0.079$)	6.06 (0.88)	5.38 (1.00)	0.67	$p=0.094$

*JO-Video & SRL-Text significantly ($p=0.031$) different also from two-way video (-0.99)

^ϕTwo-way text significantly ($p=0.001$) different also from two-way video (-1.57)

^θMarginally statistically significant

V. DISCUSSION AND CONCLUSIONS

A. Discussion and Implications of the Results

The goal of this Article is to introduce the idea that JODR systems can improve the realities of pro se litigation in administrative hearings and civil court proceedings involving SRLs and governmental agencies. An account of the key challenges associated with pro se litigation indicated that many of them arise out of SRLs' lack of legal and procedural knowledge and the dynamics and strictures of the judicial process. After reviewing JODR implementations and considering technical constraints related to accessing justice through technology, the Article proposed a general framework and guiding principles for the design of JODR systems that serve SRLs. The Article also explored the advantages of remote participation via asynchronous JODR systems that are accessed through internet-connected devices. It further argued that asynchronous JODR systems can improve the fair operation of judicial proceedings involving SRLs as well as the ability of SRLs to meaningfully and effectively participate in the process.

Advancing this proposal further, the Article considered the impact of conducting asynchronous JODR processes via text or video communication on SRLs' procedural justice experiences. While the majority of current ODR and JODR systems are based on textual communication, classic theories of communication such as MRT and SPT generally predict that for complex and nuanced tasks of this sort, video-based communication would be preferable. The guiding hypothesis of the study, however, diverged from both common ODR practice and classic theories. It postulated that due to the specific challenges that SRLs face, they would be better served by a JODR system design in which they *send* textual communications and *receive* video communications. Putting this proposition to an empirical test, the reported experiment compared SRLs' procedural justice experiences in asynchronous JODR processes that use four different combinations of video-based and text-based communication between the SRL and the judge.

The results of the experiment are consistent with the hypothesis. The JO's medium of communication had a consistent main effect on subjects' procedural experiences, regardless of whether SRLs used text or video communications: When the JO communicated via video messages, SRLs experienced greater voice, sense of being "heard," and interactional justice, and reported more positive evaluations of the performance of the judge and the effectiveness and appropriateness of the JODR system interface (see Table 4).

The procedural justice advantages of the JO-Video & SRL-Text system design compared to both the common two-way text communication as well as the theoretical preference for two-way video communication were confirmed. First, post hoc analyses of the two-way ANOVA interaction showed that receiving video messages from the JO, rather than text messages, improved the procedural experiences of SRL who communicated in text form. Specifically, it resulted in more favorable evaluations of the fairness of the process, the fairness of the JO, and the appropriateness of the JODR system interface, as well as reduced negative affect (hopelessness, stress, anger, and frustration) on the part of SRLs. Similar marginally significant simple main effects were observed with respect to process control, decision control and sense of empowerment (see Table 5). In much the same way, SRLs who communicated via text messages, rather than video messages, experienced reduced negative affect, improved process fairness and increased sense of empowerment when receiving video communications from the JO (see Table 6). A one-way ANOVA comparing the four possible system design media combinations reaffirmed these findings. Its results demonstrate that compared to a two-way textual hearing process, SRLs in the JO-Video & SRL-Text treatment thought that the process was fairer, that they had more "voice"

(sense of participation), that the JODR system interface was more appropriate and the JO was less indifferent to them. They also experienced less negative affect. Interestingly, as predicted, the JO-Video & SRL-Text design resulted in *less* negative affect also compared to the two-way video communication design, which was otherwise not significantly different from it (see Table 7).

The Article postulated that an asynchronous JODR system in which judges communicate via video and SRLs communicate via text would improve SRLs' ability to effectively and thoughtfully present their case in an informed fashion, without being interrupted or dismissed. It further argued that the proposed design would increase SRLs' sense of empowerment and of being heard, and reduce the emergence of negative emotions in the process. Indeed, the findings demonstrate that video communication on the part of the judge results in better procedural experiences of SRLs who participate in text-form. The specific measures affected by the manipulation are consistent with the outlined rationales, lending empirical support for the proposed JODR system design.

This finding has important practical implications. It suggests that ODR and JODR systems that rely exclusively on text-based communication—which are currently the majority of systems—could improve the procedural justice experiences of their self-represented users by incorporating a video communication component on the part of the judge (and possibly arbitrator or mediator). This notion is consistent with the idea that a rich communication component, which promotes social presence in the interaction, is desirable for JODR processes. One possible explanation for the consistent effect of video-communication by the judge on multiple procedural measures is that richer media facilitate greater levels of interactional justice, which in turn serves as a heuristic for core procedural justice dimensions.²⁰⁴ This heuristic is likely particularly salient in the case of SRLs, who lack the knowledge to assess the processes against legal standards.

Despite the obvious advantages of video interaction over textual interaction, consistent with the hypothesis, two-way video communication did *not* result in better procedural justice experiences. On all measures but one, there were no significant differences between the two-way video process and the JO-Video & SRL-Text process. Moreover, the only observable significant difference was, as predicted, *in favor* of the proposed system design: the JO-Video & SRL-Text media combination resulted in less negative affect than the two-way video process. Further research is required to determine whether, on top of the abovementioned benefits of textual communication for SRLs, there are other explanations to these

²⁰⁴ See *supra* note 188 and accompanying text.

interaction effects. One plausible post-hoc hypothesis is that responding to the JO's video communications via textual communication mitigates the "hierarchical silencing" effect that exists in judicial proceedings that involve SRLs, by structurally avoiding a leveled media comparison between the judge and SRL.

In any event, on a practical level, these findings can have significant implications on the accessibility of JODR systems. They suggest that in terms of SRLs' procedural justice experiences, there may be no need to invest in a costlier, less accessible, and more difficult to maintain two-way video process. The absence of significant differences between the two system designs provides justification for turning to the more cost-effective and accessible Judge-Video & SRL-Text process design. Moreover, the latter process design has a *qualitative* advantage: SRLs' reduced negative affect. Thus, rather than aspiring to mimic in-person hearings online by using costly, complicated and less accessible two-way video communications, JODR system designers can consider a Judge-Video & SRL-Text process design. Indeed, courts and other judicial bodies are well-positioned to finance and maintain the necessary infrastructure for video communication, especially compared to SRLs, for whom asynchronous text-based communication is the least expensive, most widely exercised and most readily accessible form of consuming online services. Asynchronous textual communication imposes minimal hardware and software requirements on SRLs, and reduces the likelihood of technical recording or transmission problems.

Beyond the testing of hypotheses, from a policy perspective, it is important to note that across all treatments, subjects viewed the JODR process favorably, with most procedural measures averaging well over 5 points in a 7-point scale. Moreover, when asked to indicate in free text the three words that best describe the OERP JODR process, subjects' most common responses were: fair (51% of subjects), quick (44%), and efficient (38%).²⁰⁵ Although the experiment did not directly compare JODR and in-person judicial processes, subjects believed that they were testing a real judicial system as part of a potential procedural reform that would affect their community, and they were very engaged with the experiment.²⁰⁶ Their positive spontaneous free-text evaluations convey the potential of JODR to positively transform the experiences of SRLs.

From a system design perspective, the results demonstrate that variations in technology generate differences in procedural experiences, and

²⁰⁵ Subjects were presented with this question before they answered any other question in the post-experimental questionnaire. The next most common responses were: easy (22% of subjects), impersonal (15%), thorough (12%), and straightforward (12%).

²⁰⁶ Over 70% of subjects voluntarily provided additional comments and proposals for improving OERP after they completed the study.

specifically, that they affect the perception that a process is fair. JODR and ODR system designers must account for the explicit and implicit effects of technological choices on the quality of users' experiences and the nature of their participation. As more justice systems begin instituting JODR systems, further research is required to expand our knowledge of the behavioral and attitudinal effects of various system designs and technologies, as well as ensure that the full potential of JODR is realized.

Indeed, appropriately designed JODR systems present a feasible and beneficial supplement to traditional in-person judicial processes. At its most basic form, a JODR system can be designed to cater to the needs of the *typical* SRL. In its more advanced form, a JODR system can provide flexible process designs: the option for each SRL to consider his or her personal abilities, preferences, and needs in order to choose the procedural variation that best serves them (e.g. text or video communication, asynchronous or synchronous process, etc.). The fact that all four process designs, including two-way text, were positively received points to the potential plurality of technologies that can be adequately incorporated in JODR systems. In fact, in many respects, JODR systems enable taking Professor Frank Sander's multi-door courthouse vision²⁰⁷ to its ultimate form: tailoring each process—in terms of both technology and dispute resolution method—to litigants' individualized needs.

B. *Qualifications and Additional Remarks*

The interpretation of the experimental results is subject to some qualifying remarks. First, the size of the differences between the tested system designs and the relatively modest size of the described effects should be taken into account. Second, despite the high internal and external validity of the experiment, the context-sensitivity of procedural evaluations²⁰⁸ warrants a careful interpretation of the findings with regard to other institutional settings, technologies, process designs, case types, and populations. In other words, the findings are reflective of the procedural and technological features of the OERP experimental system as well as of the characteristics and preferences of the subject population. Stanford University students are arguably more tech-savvy and literate than the general population and the population of SRLs, likely affecting their level of comfort using a JODR system and their media preferences. However, as the review in Part I suggests, the population of SRLs is diverse,

²⁰⁷ Frank E.A. Sander, *Varieties of Dispute Processing*, in PROCEEDINGS OF THE NATIONAL CONFERENCE ON THE CAUSES OF POPULAR DISSATISFACTION WITH THE ADMINISTRATION OF JUSTICE 65, 83–84 (A. Leo Levin & Russell R. Wheeler eds., 1979) (envisioning “a flexible and diverse panoply of dispute resolution processes, with particular types of cases being assigned to differing processes (or combination of processes) . . . where the grievant would . . . [be directed] to the process (or sequence of processes) most appropriate to his type of case”).

²⁰⁸ See *supra* note 188 and accompanying text.

and it increasingly includes not only indigent individuals but also individuals who feel competent to self-represent and do so by choice.²⁰⁹ Moreover, as the digital divide continues to shrink and the use of the internet becomes widely prevalent, differences in media preferences are likely to gradually disappear.

Third, it is debatable whether the perceptions of litigants should be the primary focus of normative discussions about judicial processes.²¹⁰ On a practical level, as previously discussed, accounting for SRLs' perspective is an important component of guaranteeing the effectiveness of judicial processes. Moreover, procedural justice perceptions influence the evaluation and perceived legitimacy of the institutions and decision-makers responsible for resolving disputes,²¹¹ as well as acceptance of their decisions.²¹² The normative desirability of this approach is justifiable because like other societal institutions in democracy, courts draw their authority and legitimacy from the mandate given to them by society (their constituents), and “[i]t would be strange, indeed, to call a legal system democratic if its procedures and operations were greatly at odds with the values, preferences, or desires of the citizens.”²¹³

Nonetheless, SRLs' subjective procedural justice experiences should not be the sole normative consideration in the design and regulation of pro se litigation processes. Attitudes are amenable to manipulation, and the risk of a “false consciousness” seems particularly worrisome in the case of SRLs. Thus, the design of JODR systems must be guided also by objective justice criteria, such as optimizing the amount, accuracy, and relevance of the information that reaches judges or minimizing bias in the presentation of evidence.²¹⁴ Research is required to study the behavioral impact of various JODR system designs as

²⁰⁹ See *supra* notes 17–18 and accompanying text.

²¹⁰ It is debatable whether it is at all desirable to base a prescriptive normative position on people's intuitive perceptual reactions, especially if they were gleaned in an experiment. See Mark Kelman, *Intuitions*, 65 STAN. L. REV. 1291, 1296–97 (2013) (“The . . . proposition—that intuitions, however intuitions are defined, count a great deal if our goal is to determine what is truly normatively desirable . . . —is extremely controversial.”); see also Robert M. Hayden & Jill K. Anderson, *On the Evaluation of Procedural Systems in Laboratory Experiments: A Critique of Thibaut and Walker*, 3 LAW & HUM. BEHAV. 21 (1979).

²¹¹ Tom R. Tyler, *Governing and Diversity: The Effect of Fair Decisionmaking Procedures on the Legitimacy of Government* 28(4) LAW & SOC. REV. 809 (1994); Tyler, *supra* note 172, at 103–04.

²¹² TOM R. TYLER & YUEN J. HUO, TRUST IN THE LAW: ENCOURAGING PUBLIC COOPERATION WITH THE POLICE AND COURTS 55 (2002) (finding that procedural justice “has more influence than does outcome fairness . . . or outcome favorability.”); Tyler, *supra* note 172, at 104.

²¹³ Austin Sarat, *Studying American Legal Culture: An Assessment of Survey Evidence*, 11 LAW & SOC. REV. 427, 430 (1977).

²¹⁴ See Lind & Tyler, *supra* note 172, at 18–26 (discussing objective justice criteria and their limitations).

well as the relationship between subjective and objective justice measures.

C. Final Remarks

Justice systems face a challenging task: assuring an equitable and expeditious resolution of disputes while upholding the constitution and promoting effective, economical and efficient utilization of public resources in the administration of justice. As they struggle to balance their multiple—sometime conflicting—roles, they must anticipate, respond to, and evolve with the changing social needs.²¹⁵ The rising tide of pro se litigation reflects such changing needs of many members of society and it entails new institutional challenges. It calls for a systemic response that appropriately responds to these needs and challenges. While no one magical solution can address all aspects of the problem, a JODR system seems a particularly promising countermeasure. ODR technology is readily available and tested; there is a growing trend of successful JODR implementations in several jurisdictions and abundant experience with ODR systems in many areas. A significant share of the procedural and substantive content necessary for JODR systems has already been adapted for online distribution, and barriers to online access are becoming close to none. The institutional benefits are clear, and so is the merit of financial and efficiency considerations. This Article provides initial evidence that JODR systems for SRLs can entail also *qualitative* benefits. Held to appropriate process and technology design standards, online judicial dispute resolution systems can improve the quality of SRLs' participation, their procedural justice experiences, and the overall fairness of the process.

Technology is at our fingertips; justice may very well be too.

²¹⁵ Tonn et al., *supra* note 2, at 803.

APPENDIX: COMPOSITE MEASURE FACTOR ANALYSIS

TABLE 8: FACTOR ANALYSIS OF COMPOSITE MEASURES

Measure	Indicators	Eigenvalue	Reliability*
Process Fairness	Process was: Unfair—Fair	2.23	0.82
	To what degree: Process was neutral		
	To what degree: Process was fair		
Voice/Participation	Agree/Disagree: Able to express my views	1.62	0.89
	Agree/Disagree: Allowed to present my side of story		
Process Control	Agree/Disagree: My views were considered in the process	1.57	0.89
	To what degree: I had control over the process		
Decision Control	Agree/Disagree: Info I provided was considered in outcome	1.72	0.93
	My influence over the outcome: None—A lot		
JO Attentiveness	JO was: Attentive—Not attentive	1.64	0.90
	Agree/Disagree: JO listened when I expressed my views		
JO Respectfulness	JO was: Respectful—Disrespectful	1.45	0.85
	Agree/Disagree: JO treated me with respect		
JO Trustworthiness	Agree/Disagree: Neutral was trustworthy	1.60	0.89
	Neutral was: Untrustworthy—Trustworthy		
Interactional Justice	JO attentiveness, respectfulness and trustworthiness	2.35	0.85
Informational Justice	JO was: Clear—Confusing	1.51	0.87
	JO Explained Process: Not at all—Fully		
JO Fairness	JO was: Fair—Unfair	1.60	0.89
	JO was: Neutral—Not Neutral		
JO Performance	JO Overall Impression: Negative—Positive	2.25	0.83
	JO was: Incompetent—Competent		
	JO Performance: Not Satisfied—Satisfied		
Process Overall Impression	Overall impression with process: Positive—Negative	3.16	0.90
	Overall OERP system is: Bad—Good		

	Recommend friends to use process: Yes—No		
	Recommend University to adopt OERP: Yes—No		
OERP compared to in-person process	OERP compared to F2F is: Worse—Better	1.72	0.93
	OERP compared to F2F is: Ineffective—Effective		
Self-Efficacy (Empowerment)	Process effect on self-image: Positive—Negative	1.53	0.87
	Process effect on competency resolving such situations: Positive—Negative		
Affect (Negative Emotions)	Process was: Stressful—Not stressful	2.42	0.78
	Agree/Disagree: Experienced anger in process		
	Agree/Disagree: Experienced frustration in process		
	I felt in the process: Hopeless—Hopeful		

* Reliability values for 2-items indices: correlation coefficient; for =3-items: Chronbach’s Alpha statistic.