

What Human-Centered Design Can Tell Us About the State of
Dispute Systems Design

by

Alyson Miller
B.A., Queen's University, 2009

A Master's Project Submitted in Partial Fulfillment of the
Requirements for the Degree of

MASTER OF ARTS IN DISPUTE RESOLUTION

in the School of Public Administration

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University of Victoria

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Executive Summary

Introduction

There is a growing recognition that public sector complaint systems do not yield results that are satisfactory for citizens and users. Often complaints are underreported, misrepresented or involve harmful reporting processes. A body of work called Dispute System Design (DSD) evolved to create a systematic approach to designing dispute resolution systems. An analysis of this literature provides insight into why these complaint systems fail. This paper aims to explore how DSD models and frameworks may be aligned with human-centered design principles to ensure they meet user needs.

Methodology and Methods

A genealogical methodology is used to critically examine the unfolding nature of DSD frameworks and models and identify the historical and contextual forces that influenced the development of the DSD. In addition, human-centred design thinking provides an appropriate theoretical lens to understand how human-centered principles and values may exist within DSD models and frameworks. This methodology exposes the shortcomings of DSD models and frameworks and the role of both users and designers in designing dispute systems.

Key Findings

The genealogical analysis of the DSD models and frameworks shows an under-emphasis of the role of users in the design of dispute systems and contributes to understanding why these models and frameworks place organizational or institutional needs at the center of the design process. However, human-centered design principles put user voice central to the dispute system's design process, where complaints can counter asymmetrical and systemic power that may permeate public sector organizations. Human-centred design thinking provides an appropriate theoretical lens for privileging and assessing user experiences of dispute systems and provides a useful understanding of the ways in which citizens make sense of the justice journey, how they construct ideas about procedural justice, and how they make decisions about what action to take in response to dispute system dissatisfaction.

There are two key clusters of findings for this paper. The first findings emanate from the genealogical analysis of DSD models and frameworks. They found that the DSD designer is often hired by the corporation or organization leadership rooting design goals in managerial needs; the concepts of power, culture and context have only recently been introduced to DSD models and frameworks; and that DSD is collaborative in nature, but it is not human-centered. The second group of findings come from the application of a human-centered lens to the DSD genealogy. They found that DSD does not include multiple design iterations or prototypes in the design process; the role of the designer is quite different between DSD and DT; and the user is not integrated into the entire design process in DSD. Each of these findings point towards how the user's needs and representation are at risk during a dispute systems design process.

Table of Contents

Acknowledgements.....	iii
Executive Summary.....	iv
Introduction.....	iv
Methodology and Methods.....	iv
Key Findings.....	iv
Table of Contents.....	v
List of Figures/Tables.....	vii
1.0 Introduction.....	1
1.1 Rationale.....	1
1.2 Background.....	2
1.2 Project Objectives.....	4
1.3 Organization of Report.....	5
2.0 Literature Review.....	7
2.1 Dispute System Design.....	7
2.2 Human-Centered Design Thinking.....	10
2.3 Summary.....	16
3.0 Methodology & Methods.....	17
3.1 Methodology.....	17
3.2 Methods.....	18
4.0 Critical Analysis of DSD.....	20
4.1 Dispute System Design Genealogy.....	20
4.1.1 The Forerunner of DSD.....	22
4.1.2 The Foundations of DSD.....	23
4.1.3 Integrated Conflict Management Systems.....	27
4.1.4 Institutional DSD.....	29
4.1.5 The Expansion of DSD.....	34
4.1.6 Summary of Findings.....	45
4.2 Critical Analysis of DSD Genealogy.....	46
4.2.1 The impact of multiple iterations.....	46
4.2.2 The role of the designer.....	48
4.2.3 Summary of Findings.....	50
5.1 Conclusion.....	52
5.1 Systemic realities.....	52

5.2	Professionalization	54
5.3	Types of Complaints.....	55
5.4	Application to Public Policy.....	56
	Summary	57
	References.....	58

List of Figures/Tables

Figure 1 Overlapping styles of Human-Centered Design.....	12
Figure 2 The “Meeting Place” (nexus) of Desirability, Feasibility, and Viability	13
Figure 3 Divergent and Convergent Thinking cycles utilized in the DT process.....	14
Figure 4 Distressed Versus Effective Dispute Resolution Systems.....	24
Figure 5 Barendrect (2009b) five-step model for designing dispute systems	39
Figure 6 Gill et al. (2016) dispute system design model for consumer redress	44
Table 1 DSD Genealogy	21
Table 2 Summary of Design Principles from Shariff (2003).....	29
Table 3 Smith & Martinez (2009) Analytic Framework	35
Table 4 Nine DSD Principles by Bondy & Le Sueur (2012).....	41

1.0 Introduction

All of our ideas of conscious self-determination lead us to a new method: it is not merely that we must be allowed to govern ourselves, we must learn how to govern ourselves; it is not only that we must be given free speech we must learn a speech that is free; we are not given rights, we create rights; it is not only that we must invent machinery to get a social will expressed, we must invent the machinery that will get a social will created.

Mary Parker Follett, The New State, 1918

1.1 Rationale

During the first two months of 2019, the United Nations, Canadian amateur sports, and the American Economic Association were all exposed as enabling long-term, pervasive cultures of workplace sexual harassment, assault, and discrimination (Casselmann & Tankersley, 2019; CBC Radio, 2019; Nichols, 2019). These organizations are just three of many public workplaces to have revealed this type of culture in recent years (others include campus sexual violence complaints, Backhouse et al., 2015; Canadian Armed Forces, Deschamps, 2015; and RCMP, Mitchell, 2015). The public outrage towards the revelation of these systemic injustices is understandable. As the evidence mounts into the systemic dysfunction that enables these cultures to persist, there is also a growing public appetite for identifying why and how these systems of complaint and redress are failing.

Driving the outrage is a fundamental desire for justice and a need to overcome and change the fundamentally flawed systems that enable such injustices. Citizens have an expectation of just institutions and possess a need and right to express their experience or dissatisfaction when an injustice occurs within their public institutions. The United Nations included “Peace, Justice and Strong Institutions” as one of their 17 Sustainable Development Goals to globally strengthen the rule of law and their institutions as a means to protect democratic stability and human rights (United Nations, 2019). As well, political voice is recognized as an essential human need by economists and a minimum social standard necessary for humanity to thrive (Raworth, 2018). Antagonizing these fundamental human needs for justice and political voice is a discussion

surrounding the systems of complaint or redress within our democratic institutions. In this paper I ask: *why do systems of complaint and redress continue to fail?*

To better understand this concept, some initial questions might be: *who are these systems of complaint intended to serve? Are they intended to support the employer and the interests of their organizations? Or are they intended to support the users of the system? How are the interests of the employer vs the user balanced, if at all?* In the public scenario of underreported, misrepresented or harmful reporting processes, who is the system failing: *the institution or the citizen, or both?* These are fundamental questions that have implications with the way we design systems of complaint.

A key premise of this paper is that the orientation of a complaint system varies greatly depending on who is involved in designing the process. Gill (2018) explains this challenge as a dichotomous difference in philosophy and purpose between “complaint systems as systems of control”, and “complaint systems as systems for disruptive innovation” (para. 10-11). Gill points towards a need for clarity between these two approaches. The first is a system that reinforces the status quo, where complaint systems do not challenge existing rules and cultures but serve to enforce (and reinforce) them. The latter describes a system based in double-loop learning, and the reporting process is a place where citizen’s experiences can be addressed and utilized as sources of innovation and the transformation of public services. It is the premise of this paper that the philosophical orientation and undergirding values inherent of a complaint system will drive *how* a dispute system is designed—the principles inherent in the methodology used—and in turn, will shape the functioning of the dispute system to be a system of control or of innovation.

Undergirding these two approaches to system design is the question causing the tensions unfolding within the media and wider society: *how can a system of redress address the needs of the user while still ensuring organizational integrity?* Understanding the evolution of designing public service complaint systems will reveal the social values that have driven this work and make way for a design methodology that ensures citizen needs.

1.2 Background

Over the past few decades a body of work called Dispute System Design (DSD) has emerged. This

work introduced and legitimated non-adjudicative decision-making mechanisms to increase access to justice, legitimizing informal justice and facilitating public voice. DSD applies a set of design principles for the systematic creation and implementation of a dispute resolution system, composed of multiple dispute resolution processes to address a recurrent conflict (Rogers & Bordone, 2019, p. 3). Dispute resolution mechanisms can create a resolution process for a wide range of conflicts including: organizational conflict, collective law suits, human rights violations, government and citizen disputes, consumer complaints, peace seeking in post-conflict situations, or facilitating deliberative democracy amongst multiple competing interests (Menkel-Meadow, 2009).

Historically, designing dispute systems has underplayed the voice of users—user needs have played an uncertain role in shaping complaint systems. Users are too frequently excluded, underutilized, tokenized, overlooked, provide a one-time source of ad-hoc data at the conception of the design process, or provide feedback requested solely after the system’s design is complete. Rarely are users involved in a meaningful way to contribute to the design and continued operation of the dispute system (Nabatchi & Amsler, 2014; Nabatchi et al., 2015) and user contribution is typically reactive and unsystematic (Bondy et al., 2014; Lipsky, 2015). Of particular concern, the user experience in DSD has been insufficiently evaluated in the academic literature (Lipsky, 2015). For example, the systemic realities of power, culture, equity, accessibility, context, and previous life experience impact the user’s ability to engage in the complaint process (Hernandez-Crespo, 2017b) have not been a consideration in DSD frameworks until recently (Amsler, 2017) and, examination of recent complaints failures (e.g. within the RCMP, Houlihan & Seglins, 2019) tells us that refinements are not necessarily being incorporated into practice.

The growing number of high-profile cases of redress system failings point towards systemic inabilities to balance power with user voice to effectively address complaints and provide meaningful resolution. In 2014, at the Dalhousie University School of Dentistry, there were numerous complaints made by female students to University authorities against a group of male dental students which repeatedly received an inadequate response to address or investigate the accusations (Backhouse et al., 2015). Similarly, investigations into complaint handling within the Canadian Armed Forces (Deschamps, 2015) and Royal Canadian Mounted Police (Mitchell, 2015; Report into Workplace Harassment in the RCMP, 2017), uncovered pervasive, systematic cultures of workplace harassment, sexual harassment and assault and exposed the failings of complaint

handling processes that could not meet the needs of users, primarily women. Most recently, three women came forward with allegations from 30 years ago against an RCMP physician, stating their initial attempts to address the sexual misconduct were “not taken seriously” — they were told the physician would be dealt with internally, but he was not (Houlihan & Seglins, 2019). In this case, one woman has filed a class-action law suit against the federal government on behalf of anyone victimized by abusive doctors at the RCMP, as a way to have past injustices righted. These women reported that they have lost confidence in the ability of the RCMP to address their complaints and conduct internal investigations. Loss of public trust in mechanisms of complaint in public institutions erodes the fabric of democracy. One wonders, *how do these injustices occur when systems of complaint are in place? Why do they fail, and how can we design systems of complaint that will ensure justice is granted to all those who use them?*

The consequences of a design process failure include under-reporting, mishandled reporting, and continuation of systematically injurious and/or unjust behavior. The ramifications upon organizations, both in public and private sectors, is disturbing and pervasive. With the recognition of numerous complaint and redress system failures a new narrative for designing or re-designing these systems is timely.

1.2 Project Objectives

The purpose of this paper is to explore why complaint systems fail. To do this, I will attempt to show how these systems do not robustly meet the needs and experiences of users, administrators, and other stakeholders through a lack of user involvement in their design. The following questions are the key research questions for this paper:

- *How human-centered is Dispute System Design?*
- *What value can Design Thinking provide the practice of Dispute System Design?*

To answer these questions, a genealogical critical review of the various models and approaches to dispute system’s design will be undertaken. I will spotlight the historical role of user and designer voice in the design process to expose the underutilization of user voice. The analysis shows that the experiences of the user have not been taken seriously and I will explore how DSD is primed for an approach to design that is human-centered. The principles of Human-Centered Design

(HCD) and Design Thinking (DT) will be explored as a methodology for mitigating redress system failures and building DSD systems more attuned to the needs of users. Human-Centered Design is a set of principles which meaningfully embed human experience into the understanding and construction of a program, service, process or system (Brown, 2009; Nesta, 2016; Design Council, 2017). In human-centered design thinking, users of the system are acknowledged as experts who provide critical feedback about the operations of the system during the design phase, and they are a key metric used to measure effect and impact (Design Council, 2017, p.5).

This project is collaborative inquiry born out of mutual curiosity by Supervisor and Candidate, surrounding the potential of applying DT practices with the DSD field. The project is intended to build the public knowledge base of DSD and user-centered theory, by exploring the current state of published literature. It is intended to provide DSD practitioners, researchers and academics engaged in both DSD and user-centered service design with a theoretical foundation for implementing DSD and DT, along with ideas on their compatibility that could spur further exploration and conversation on the topic. Any practitioner or scholar working critically within the DSD field are the target audience, or ‘client’, for this work.

1.3 Organization of Report

Section 1 covers the Rationale and Background for this paper. Section 2 provides a Literature Review of DSD reflecting on the shifting nuances and values that undergird DSD models and frameworks and spotlights how the principles guiding the practice of DSD have evolved and been shaped by larger social, economic, and cultural forces. The Literature Review also describes the tenets, principles and values of HCD and DT. Section 3 describes the Methodology and Methods of the data analysis. This section includes a description of genealogical critical analysis, which offers a lens and methodology through which dispute system design may benefit. Section 4 provides the Critical Analysis of DSD and is broken into two parts. The first is a Genealogy of DSD that will examine the tenets, principles and values of a number of DSD frameworks to problematize the process of design and to show how Design Thinking as a methodology, may (in part) overcome the systemic barriers identified above that have contributed to complaint and redress failures. The second part is a Critical Analysis of DSD that analyzes the expert role DSD designers have taken and the extent to which user nuances such as culture and context have been

integrated into the design process. It will also state how iterative design and the specific characteristics of a Design Thinking designer can enhance dispute systems to be more centered in user needs and goals. Section 5 provides the Discussion, finishing the paper with an examination of the themes important to the evolution of dispute systems design in light of the analysis undertaken in this paper. Section 6 provides a summary of the paper.

2.0 Literature Review

The following literature review of Dispute Systems Design and Human-Centered Design Thinking will provide the reader with an understanding of these concepts that underpin the analysis of this paper. The review of DSD literature informs an understanding of the DSD frameworks analyzed in the Critical Analysis, and the review of HCD literature informs the method of the Critical Analysis. The reviews include the overarching values and tenets, along with the most relevant literature on both topics.

2.1 Dispute System Design

“Dispute System Design” is a modern invention coined by Ury, Brett & Goldberg (1988)’s work *Getting Disputes Resolved: Designing Systems to Cut the Costs of Conflict* to address institutional gaps where deliberate and sustainable choice of dispute mechanisms are required. DSD is rooted in post-modern ideals of power differentials and a commitment to interest-based dispute resolution stemming from the Alternative Dispute Resolution (ADR) movement that originated in the 1980s (Ury et al, 1988; Fisher & Ury, 1981; Gill et al., 2018). DSD is credited as the design process for ADR: an informal dispute processes for resolving disputes outside a litigation-centric approach, sometimes as a standalone decision-making body (i.e. an arbitration body), and other times as an integrated set of steps set up as incremental interventions occurring prior to, but in conjunction with the legal system (i.e. conflict coaching, facilitation, conciliation, mediation) (Gill et al., 2018). From the perspective of ADR, the adversarial nature of litigation needlessly positions parties into a relationship destructive and detrimental to the future of the relationship. Frank Sander, called the father of the modern ADR movement, coined DSD as the ‘multi-door court house’, where disputants who entered the courthouse could choose a ‘door’ for the dispute resolution process that best fit their context and conflict (Gill et al., 2018, p. 2). Litigation-centric processes are critiqued as distributive (win-lose) in nature, while ADR provided an alternative, or what others title ‘appropriate’, provision of justice (Davis & Gadlin, 1988, p.62; Menkel-Meadow, 2016; Amsler, Martinez & Smith, 2015).

During the 1930s and 40s, negotiations by unions worked within the context of a top-down workplace structure where employers dictated rules over employees. DSD rose to prominence

within the public and private workplace due to the changing relationship between employers and employees in the second part of the twentieth century resulting from an increase in civil rights protections and legislation that regulated employer-employee relations (Lipsky, Seeber, & Fincher, 2003, p. 58). With the slow decline of power-based, hard ball negotiations that often resulted in strikes, there emerged a need for a new system of conflict management, which would be ADR, to supplement the adversarial grievance processes (Lipsky, Seeber & Fincher, 2003, p. 29-33).

‘Process pluralism’ evolved within the same time frame as ADR. Process pluralism is a process for designing forums that utilized multiple DR procedures, including negotiation, mediation, arbitration and adjudication, to address a single dispute (Menkel-Meadow, 2005, p. 19). The first documented use of this approach was in 1977 (before Ury et al.’s landmark book), with an intervention that used a mixed-negotiation, mediation and arbitration procedure in a major patent infringement case. All parties reported high satisfaction with the adaptive, party-designed procedure that resulted in financial savings and focused on business interests not technical legal issues (Menkel-Meadow, 2005).

DSD evolved to fill the space within institutions and communities to create systematic Conflict Management Systems (CMS). Constantino & Merchant (1996) were the first to use an organizational lens and apply DSD to a corporate, organizational structure expanding the reach of DSD from simply ‘justice alternatives’ that Ury et al. (1988) described, to more broadly applicable ‘conflict alternatives’ available within organizations called CMS (Amsler, Martinez & Smith, 2015). Constantino & Merchant (1996) provided a DSD framework for building CMS that was instrumental in the development of future frameworks for internal complaint systems (Rowe, 1989, 1991, 2009), and what would come to be known as integrated conflict management systems (ICMS) (Gosline et al., 2001; Bendersky, 2003, 2007; Lynch 2001). The authors of ICMS and internal complaint systems responded to Constantino & Merchant (1996)’s work by emphasizing a more holistic and dynamic approach to conflict management systems. Together, CMS and ICMS, laid the theoretical foundation for modern complaint systems and systems of redress and were adopted into in quasi-judicial systems (Smith & Martinez, 2009), into public institutions (Bingham, 2008; Shariff, 2003), consumer-to-business disputes (Gill et al., 2016), and micro-justice (Barendrecht, 2009a, 2009b).

DSD principles are rooted in neoliberal understandings of the individual as the basic unit of state analysis (Cohen, 2009, p. 56). In the same way that neo-liberal methods attempt to isolate for social, environmental, historical and material factors, so too does DSD traditionally envision a process in which systems can be designed for individuals without wholly considering these systemic influences. New Public Management was introduced into public governance during the 1980s and 90s fusing private sector innovation to public sector ideals focused on accountability, managerialism, and efficiency (Martin, 2011; Leakey, 2018, p. 8). These influences set up early DSD work to be oriented towards meeting the goals of efficiency and control and viewed the user to be free from cultural or contextual factors.

Throughout the 90s and early 2000s the DSD literature was largely uncritical of issues of context and culture. A scholar that challenged this assumption was Mariana Hernandez-Crespo (2008, 2011, 2017a, 2018b). She took the concept of DSD that the founders Ury et al. (1988) and Constantino & Merchant (1996) developed and applied it to the community level in the hopes of addressing conflict arising from foreign investment into community development initiatives. Through this application, Hernandez-Crespo recognized the necessity of involving the system's user in the creation of DSD for their communities, to ensure the DSD is culturally relevant and attuned to power differentials. While previous frameworks refer to stakeholder input in designing a dispute system, Hernandez-Crespo (2017b) *privileged* user input. With this emphasis on the user she believed DSD could be used to promote overall justice, accountability and impact for all who access systems of dispute resolution (p. 167). Hernandez-Crespo's observations about culture and power were the first DSD scholarship on the topic but has since been picked up by other authors including Amsler (2017), and Amsler, Smith & Martinez (forthcoming).

Hernandez-Crespo's critique of DSD as situated in neo-liberal values and her work to recognize elements of power and culture into the design process, centralize user needs thus decentralizing institutional needs, pointing towards a paradigm shift in DSD purpose. Gill (2018) articulates a similar divergence in the philosophy and purpose of complaint systems between "complaint systems as systems of control", and "complaint systems as systems for disruptive innovation" (para. 10-11). The latter positions complaint systems as places to "restore relationships, share experience and co-create value" (Gill, 2018) and views complaints as "an expression of citizenship and a form of democratic participation" (O'Brien, 2018). This work demonstrates that DSD is at a

juncture that could enable mechanisms of redress to be designed and built in such a way that goes beyond their use as mechanisms of control to neutralize public discontent (Gill, 2018).

In summary, DSD still remains rooted in its structure of interest-based system design to provide justice for recurrent or systemic disputes. ADR relied on DSD to improve organizational efficiencies and improve user access to justice. While the interest-based project (what came to be known as ADR) offered an option to the rights-based decision-making processes that dominated pre-1980s, the DSD project offered a way implementing ADR as an integrated system within organizations. DSD has been adapted for a variety of contexts, each time evolving the scope and understanding of DSD. Based on this brief overview of the history of DSD since the 1980's, a number of DSD frameworks will be selected for analysis to show how these frameworks evolved over time and how the role of the user in the design of these frameworks also evolved. In the next section, HCD and DT literature are reviewed to describe how it can be used as a tool of analysis for DSD frameworks.

2.2 Human-Centered Design Thinking

In 1955, Henry Dreyfuss, renowned industrial designer and author of the book *Designing for People*, began a conversation surrounding the industrial designer's view on the importance of user's perspective and context in their work engineering objects (Dreyfuss, 1955). Discussion of the value of the user perspective and feedback also began to occur simultaneously in other disciplines including anthropology, sociology and cognitive psychology (Zachry & Spyridakis, 2016). Recognition of the complexity of human interaction and experience began to deepen through the emergence of interpretivist and qualitative research paradigms and aligned and evolved with the field of HCD. HCD is a set of principles for negotiating multiple experiences and user needs within the design process. More specifically, HCD focuses on how people 'experience' a design, which requires a design process that facilitates human interaction and creates space for multiple perspectives and experiences to emerge (Zachry & Spyridakis, 2016).

In its current form, HCD has evolved into a method of social justice through privileging human experience in the design process (Jones, 2016). Frediani (2016) discusses the use of participatory design, a form of HCD, as a method of social change and enabling better use of governance structures in Salvador da Bahia (Brazil), Nairobi (Kenya), and Quito (Ecuador) through the

author's work of *Architecture Sans Frontières-UK* (p. 98). The author claims the application of human-centered processes to the development of public complaint systems moves the understanding of complaint systems away from simple ways to deal with existing conflicts, but an avenue of preventing future conflict as well. Frediani (2016) claims using this approach to design provides a possibility of moving from the concept of DSD away from only managing disputes to creating a more systematically just city (p. 111). Examples such as these provide the insight that DSD is ripe to apply this style of human-centered innovative thinking.

The term "human-centered" developed from the social science field of human psychology (Quintanilla, 2017), whereas the term "user-centered" developed from the field of engineering, computer science and industrial design (Design Council, 2013, p. 24). HCD is a set of design principles that evolved from the term "human-centered" whereas DT developed from the term "user-centered". Once these two concepts were brought into the innovation and creative thinking sectors, they became widely used interchangeably. This paper distinguishes HCD as a set of principles and DT as the methodology informed by them. Both concepts will be contextually explained as separate and emerging topics, as well as considered together throughout the critical analysis.

HCD puts citizens, consumers, employees, or any user of a system at the center of design process. This includes the development, implementation and evaluation of a program, service, process or system (Design Council, 2017). HCD acknowledges the complexity and uniqueness of human experiences and recognizes that what one individual considers to be important about a setting or situation might not necessarily be true for the next individual. A human-centered approach to design requires methods that will expose whether the program or service is human-centered, to reveal when, how, and why particular perspectives are at play, and ensure designers are connected to user human needs (Steen, 2011, p. 46). There are a variety of HCD methods that have been developed to address the challenges these questions pose. The most commonly used methods include: Empathic Design, Contextual Design, Ethnography, Participatory Design, Lead user approach and Co-design (Steen, 2011, p. 48). Below is a diagram of their overlapping intersections.

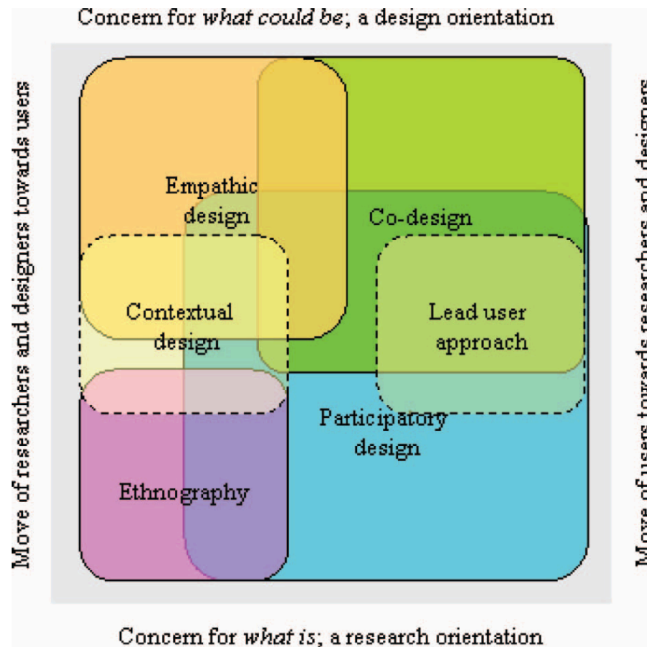


FIGURE 1 OVERLAPPING STYLES OF HUMAN-CENTERED DESIGN

In this project, I will focus on the Design Thinking method. DT method falls within the Co-design approach. Co-design is “an attempt to facilitate users, researchers, designers and others – or diverse people with diverse backgrounds and skills – to cooperate creatively, so that they can jointly explore and envision ideas, make and discuss sketches, and tinker with mock-ups or prototypes” (Sanders, 2000, p. 52). Co-design can be done with system users, as well as with “everyday-people” who may not self-select as a system’s user, depending on design methodology. DT puts the human or user at the center of the design story and uses techniques of empathy, iteration, ideation, and prototyping to ensure users are intimately tied to the design process and outcome (Brown, 2009). DT is a subset of Human-centered Design, where DT is human centered, but HCD does not necessarily have to take the form of DT.

The process of DT is a reaction to industrialization, where the drive to mass produce goods led to the Designer role splitting into a small artisan class of “highly-skilled workers whose role it was to design, and a large body of lower-skilled laborers whose role it was to produce, repeatedly, the pre-designed objects” (Design Council, 2013, p. 24). The precise moment DT was conceived is nebulous, as its evolution occurred incrementally, influenced by the commercial sector it was initially established within. The evolution remains influenced by capitalist economic theory as the

process was most commonly used to increase profit gain for private business; however, DT, “continues to expand its meaning and connections revealing unexpected dimensions” into more sectors (Buchanan, 1992). The process of DT has become so synonymous with social innovation and the creative thinking sector, it is challenging to determine when the principles of DT began to merge with a human-centered approach to design.

Tim Brown and Robert Katz, two foundational thinkers at IDEO one of the largest DT institutions in North America, describe DT as the “meeting place” of desirability, viability, and feasibility (Brown, 2009, p. 21): desirability describes the user and stakeholder’s needs and aspirations, viability refers to what is financially possible, and, feasibility determines what is technologically or otherwise possible within the foreseeable future for the design (IDEO, 2015, p. 13-14; Brown, 2009, p. 18). See Figure 2 below.

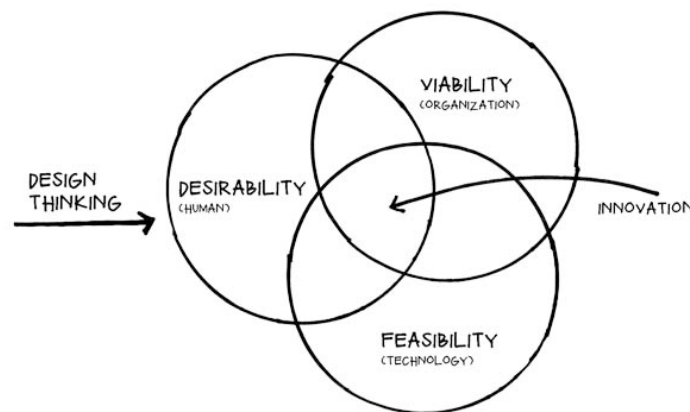


FIGURE 2 THE “MEETING PLACE” (NEXUS) OF DESIRABILITY, FEASIBILITY, AND VIABILITY

IDEO describes seven creative mindsets that guide the designer’s work: Empathy, Optimism, Iteration, Creative Confidence, Making, Embracing Ambiguity, and Learning from Failure (IDEO, 2015). The three principles that define IDEO’s DT methods are: human-centered, ideation and prototyping. For these authors, ‘human-centered’ refers to the unique position of the user or consumer at the center of the design process through elevating human insights for product and service ideas (p. 49). ‘Ideation’ refers to the unique process of generating as many ideas as possible without judgement. The design team observes for insight and empathizes not simply scrutinizes

(p. 56). ‘Prototyping’ is used to speed up and clarify the process of innovation through the generation of ongoing iterations (p. 91). These values are applied to the design method that includes three phases: inspiration, ideation and implementation (Brown, 2009). Inspiration refers to the process of coming to understand the users, ideation refers to the generation of ideas while testing and refining them, and implementation refers to creatively and effectively rolling out the design (IDEO, 2015). DT utilizes the concept of Divergent and Convergent thinking to explain these three phases (see Figure 3 below). Divergent Thinking is the process of brain storming ideas without the application of judgement or categorization. It is intended to provoke a free flow of ideas, and an environment of creativity, collaboration and possibility. Convergent Thinking occurs on the other end of Divergent Thinking, it is the process of synthesizing, categorizing, and limiting the ideas previously generated (p. 66-69). See Figure 3 below for a graphic representation of the Divergent-Convergent Thinking process.

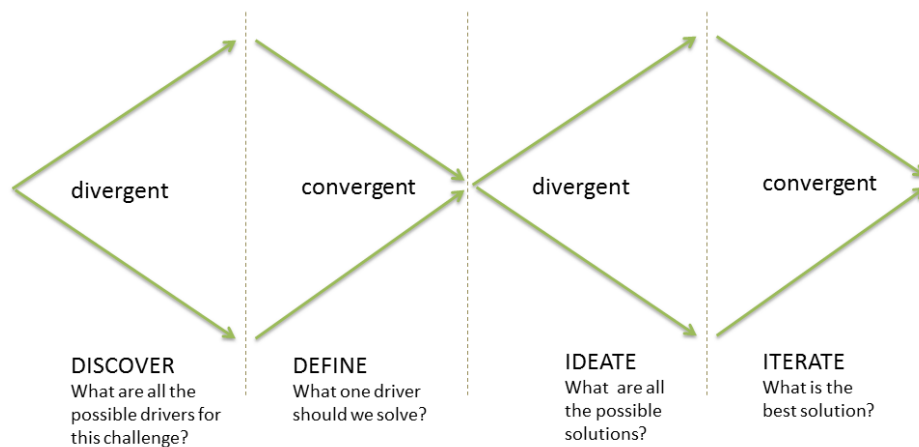


FIGURE 3 DIVERGENT AND CONVERGENT THINKING CYCLES UTILIZED IN THE DT PROCESS

Brown & Katz are not the only authors to describe a methodology for DT. For example, the Stanford d.School describes the process in their Five Modes of the Design Thinking Process Guide: Empathize, Define, Ideate, Prototype, Test (Plattner, 2010); The Behavioral Design Lab developed four stages: Discover, Define, Develop, Deliver (Behavioral Design Lab, 2015); and Kumar (2013) has Seven Modes for the Innovation Design Process: Sense Intent, Know Context, Know People, Frame Insights, Explore Core Concepts, Frame Solutions and Realize Offerings. All of these DT

frameworks are rooted in the same values outlined by Brown (2009) and thus the definition of DT used in this paper will incorporate the underlying values and philosophy of all these frameworks.

There is a growing profile for DT around the world, including North America, Europe and other Commonwealth countries (Allio, 2014). The DT approach to social innovation cross-pollinated with the public sector at the turn of the century with the establishment of the Danish government's internal design agency, MindLab, in 2002 (Design Council, 2013). Since this time, it has been incorporated into high profile cabinet advisory positions, a variety of public service training workshops, diploma programs and post-secondary education curriculum, think tank style operations, and community-based initiatives across the globe (Design Council, 2013).

One of the unique characteristics of DT is that it requires a variety of ideas without judgement or disqualifying an idea due to its cost, author, or other merit characteristic. In a shared language of DT, a greater potential for collaboration amongst different sectors, disciplines and backgrounds can exist (Sanders, 2000). It treats the user as part of a larger interconnected web of relationships important to the design process and employs a prototyping process that necessitates iteration of user input. It does not place the designer or any participant or stakeholder in the design process as more influential than another. The horizontal nature of DT can now be viewed as a method of social justice through privileging human experience in the design process (Jones, 2016).

Quintanilla (2017) adopted IDEO's human-centered design methods described above with DSD called Human-Centered Civil Justice Design, a blend of human-centered design and dispute system design, to build innovative civil justice solutions through the designer's immersion, interviews, observation and psychological inquiry with system users and empirically evaluated pilot designs (p. 746). Quintanilla put a particular emphasis on iteration through proposing intentional pilot projects and 'scaling-up' when designing systems, along with recognizing that those who use the civil justice system are the ones who have the answers to dealing with its most vexing problems (p. 789). This is one example of the recent uptake of human-centered principles into the design of justice systems. There are also an increasing number of cases where students of the law are combining their legal skillsets with those of design. There is an interdisciplinary team based at Stanford Law School & d.school who work on legal design initiatives. The Winkler Institute for Dispute Resolution at Osgoode Hall Law School offers students the opportunity to work in interdisciplinary project teams to tackle a design challenge that addresses a real justice problem in

the dispute resolution context. Together these initiatives are evidence of the marriage that exists between HCD and DSD (Lowenberger, Keet, & Anderson, 2017, p. 150). These initiatives represent an opportunity to use human-centered principles into the design of complaint systems more intentionally rooted in the needs and values of those utilizing those systems.

2.3 Summary

In summary, HCD is a set of principles which meaningfully and purposively embed human experience into the understanding and construction of a program, service, process or system (Nesta, 2016; Design Council, 2017). HCD puts users, citizens, consumers, employees, or any involved person in a system's use, at the center of the design process including development, implementation and evaluation. DT is a specific methodology to create human centered designs that address complex problems through empathy, testing ideas early and often, generating lots of ideas small scale experimentation prior to large scale implementation and emphasizing progress over perfection (CoLab, 2016; Allio, 2014, p. 4). DT could be used as a methodology to build DSDs with the users of the system, thus increasing the value of the input, and providing a greater likelihood for system design to meet user needs. The generation of multiple prototypes and the unique characteristics of a DT designer offer new strategies for DSD. This paper seeks to demonstrate that DT provides a method to reform public services, or any complaint mechanism within an organization to be more people-centered and personalized to the nuanced context in which the DSD is operating.

3.0 Methodology & Methods

3.1 Methodology

The following questions drive the research for this paper: *How human-centered is Dispute System Design?*; and, *What value can Design Thinking provide the practice of Dispute System Design?* These questions are addressed by applying an HCD lens to numerous DSD models and frameworks that have evolved over the past number of decades and examine where and if user voice and needs are located within the process of designing dispute systems.

The research for this project rests within the tradition of qualitative research, to understand the frameworks and models of DSD within a particular historical time and context. Genealogical critical analysis is the type of qualitative methodology used, which takes into account an historical timeline, and provides a platform to examine the unfolding meanings, historical constructs, taken-for-granted truths, and the social, political, economic underpinnings and conditions of the data set (the models and frameworks) at a particular point in time. This methodology also permits a more detailed critical analysis of the values and assumptions of the specific models and frameworks. There are two goals to genealogical analysis. First, “by exposing that certain ways of thinking are not timeless truths but historical constructs, genealogy opens up space to think about them differently. Second, by unravelling the social roots of certain ways of thinking it pinpoints the way in which they lend support to possibly problematic or contradictory political and social regimes” (Saukko, 2003, p. 116).

In this instance, an analysis was completed of 14 DSD models and frameworks that emerged over a number of decades and made observations about the context in which they evolved. In addition, a human-centered design lens was brought to the analyses to understand how the principles and guidelines of each DSD framework or model upholds the HCD values of empathy, optimism, iteration, creative confidence, ambiguity, user-centered and learning from failure. This critical analysis allowed sense to be made of the way these models or frameworks are practiced and the degree to which they take seriously the involvement of users in building and sustaining complaint systems that meet user needs and resist asymmetrical power relations.

3.2 Methods

Foundational to the analytical approach taken in this paper is the research question: “*How human-centered is Dispute System Design?*”. This paper analyzes the DSD literature through the analytical lens of HCD. The analysis was built by considering where each DSD article and researcher placed humans in the construction of the dispute system. Authors were selected if they clearly explained a framework that reflected design principles, or their work influenced the values of dispute system’s design. An exploration was done of HCD principles that were present in the DSD theory, framework, case study, or other relevant article along with the way the authors framed the position of the designer in the design process and the amount of weight dedicated to the input of users were identified. The themes of culture, designer power and user context guided the analysis of the data for this research paper.

The academic literature included in the literature review are DSD frameworks, values, principles and documented implementation. This also involves the review of reports, journal articles, other publications and case study reflections where available. A variety of academic databases were consulted: EBSCOhost, JSTOR, Web of Science, Arts & Humanities Citation Index (A&HCI), Social Sciences Citation Index (SSCI), ProQuest; and other search platforms: Google Scholar and Microsoft Academic. Wider internet searching was conducted to uncover recent gray literature publications, including think tank and private sector business publications. The following is a non-exhaustive list of key terms examined:

Conflict Management System	Integrated Conflict Management System	Alternative Dispute Resolution	Dispute System Design	Complaints	Redress mechanisms
Participatory Design	Co-Design	Human Centred Design	Consumer Design	User Centred Design	Design Thinking
Public Services Consultation	Public Administration Engagement	Innovation Mutuality	Systematic Disadvantage	Inclusive Systems	Iterative Systems

The literature was reviewed for key sources, stated conclusions, shifting definitions of terms, noted gaps in literature, contradictory concepts, existing frameworks, and further recommendations. The reference bibliographies listed in peer reviewed journal articles were the

most robust sources of information and key authors and articles identified were used to create more research avenues. Key terms listed above were combined together (e.g. “Human Centered Design + Dispute System Design”), to ensure any literature in the specific field of inquiry for this paper were uncovered. A Mendeley Library was used to electronically store and organize research literature. An Excel document was used to organize the sources and record key information, analysis, and reflections. There were 320 articles identified as relevant to the research question and saved into the Mendeley Library. There were 15 texts identified, 65 titles on DSD, 40 titles on HCD and DT all identified by the research questions as relevant to the literature.

Each DSD article in the genealogical analysis was read alongside other articles from the same author, as well as other authors also publishing on that topic. This approach gave a unique understanding of the interconnectivity amongst the literature. The analysis is structured as a historical review laid out primarily in chronological order. Perfect chronological order was not followed in certain cases when linking authors together, for example Elinor Ostrom and Lisa Amsler, when one author’s literature directly influenced the second author. There are brief reflections on the significance of each author’s work as focused through an HCD lens towards the conclusion of each section.

The final critical analysis section takes the information from the genealogical analysis and asks the second question: “*What value can Design Thinking provide the practice of Dispute System Design?*”. This question builds upon the key researchers identified by the first research question and then further refines their work in terms of what DT could add to their DSD methodology. This section applies a human-centered lens to the DSD genealogy. New concepts are introduced where necessary, yet many of the authors and concepts were covered in different sections of the literature review.

4.0 Critical Analysis of DSD

4.1 Dispute System Design Genealogy

To follow is a historical chronology of key DSD literature that focuses on the ideas that helped to define the role of the user in the design process as it evolved throughout the twentieth and twenty-first centuries. The assumption here is that these key scholars influenced much of the practice of DSD in public and private institutions over the past few decades. Because evaluation of dispute systems is scant (Lipsky, 2015), the relationship between these frameworks and practice is not straightforward. That said, the review will show some major trends and the larger social and political forces that were at play for each body of work. Ultimately, the analysis will show how the role of the user of these dispute systems was not static or uniform and that as the role of the user in dispute system design has shifted so too has the effectiveness of these systems for the user.

Each framework described below will include the historical context, the key contributions, undergirding values and principles, and the significance and limitations of each contribution. A genealogical, critical lens will be used to unpack each of these contributions. There are contributions to the literature of DSD that fall outside the scope of the research questions guiding this paper. For the purposes of this essay, scholarship was selected for analysis with the research question and conceptual framework front of mind. The analysis will show the connections and reactions to the various bodies of work and will map the evolution of DSD. This review will in turn provide a context in which to consider how to strengthen this project of DSD in the twenty-first century.

This section is organized chronologically and includes various frameworks that were endorsed by one or a cluster of researchers and/or practitioners. Authors were selected if they clearly explained a framework that reflects design principles, or their work influenced the values of dispute system's design. The chronology begins with Mary Parker Follett in the early twentieth century, then skips forward several decades to the time when dispute system design grew out of the ADR movement in the early 1980's with Ury et al. (1988). The next set of authors Constantino & Merchant (1996) took the framework from Ury et al. (1988) and widened its application through their use of Organizational Development. From here DSD work evolved through its adoption into the contexts of Industrial Relations, Human Resource Management, Consumer Conflict Management Systems,

Organizational Theory, Legal Scholarship, Institutionalism, Consumer Disputes and International Foreign Investment. Each of these unique fields stretched the principles and values of DSD to fit the contextual needs of the sector, while also enabling the next author to adopt the framework with these newly defined principles and values into their own respective work. The adoption of DSD into new sectors and fields began to refine the steps of DSD, as seen for example through the changes DSD frameworks took through the evolution from Constantino & Merchant (1996) to Smith & Martinez (2009) to Gill et al. (2016); See Table 1 below.

TABLE 1 DSD GENEALOGY

DSD Author	Year of work
The Forerunner of DSD	
Mary Parker-Follett	1918
The Foundations of DSD	
William Ury, Jeanne Brett & Stephen Goldberg	1988
Cathy Constantino & Christina Sickles Merchant	1996
Integrated Conflict Management Systems	
Lipsky et al.	2001
Institutional DSD	
Khalil Z. Shariff	2003
Elinor Ostrom	1990
Lisa Amsler	2008; 2017
The Expansion of DSD	
Stephanie Smith & Janet Martinez	2009
Mariana Hernandez-Crespo	2011
Maurits Barendrecht	2009
Julie Macfarlane	2011
Varda Bondy & Andrew Le Sueur	2012
Rogers, Bordone, Sander, & McEwen	2013
Gill, Williams, Brennan and Hirst	2016

4.1.1 THE FORERUNNER OF DSD

MARY PARKER FOLLETT

Mary Parker Follett was a key forerunner to DSD. She was an American social worker, management consultant, philosopher and pioneer in the fields of organizational theory and organizational behavior, writing in the early 20th century on the importance of bringing citizens and social program users into the creation of social services and policies (Whipps, 2014). In *The New State* (1918) Follett proposed a new way of viewing the citizen, one where the individual could be uncovered and known to the state in order to advantage the citizen (p. 5), and that the necessary construct of individual self-determination is predicated on a citizen's opportunity to define the process of utilizing their own voices.

Numerous contemporary academics from the field of Social Work to Organizational Management to Public Administration have revisited the work of Mary Parker Follett, admonishing it as a foundational doctrine, providing insight far ahead of its time for the development of these theoretical concepts (Menkel-Meadow, 2005). Follett's core concepts premised in direct democracy situated the citizen or system user in the midst of designing systems and democratic institutions (Nelson, 2016, p. 180-181). Follett's work did not emerge out of a vacuum, it was influenced by her frontline work in urban Baltimore as a social worker (Russ, 1996). She called for the idea of "integrative power", where the state was not angling for "power over", "power to", or "power against", but aspiring for "power with" citizens. Follett challenged ideas of top-down decision making and turned to bottom-up "integration" and fusion of conflicting interests that could be harnessed and settled through constructive dialogue, trusting criticism and open communication, enabling multiple knowledges to guide organizations (Samuel, 1996). This process is also delineated by back-and-forth, ongoing sessions of information sharing. She used phrases like "integrative" "participatory" and "designing with the individual," before constructs like "deliberative democracy" and "co-design" entered the literature several decades later (Whipps, 2014).

Follett made two key contributions to dispute system design. The first is the idea of integrative power. Integrative power is the type of power that comes from acting in concert with other sources of power (individual, state, organization, etc.). The second is the necessity of iterative mechanisms

for connecting state and citizen voices. Iterative mechanisms are used to exchange ideas and trial of new initiatives through ongoing, reflexive channels of communication between government and citizen. Integrative power and iterative mechanisms necessitate processes that are inclusive of users and reflexive of feedback. Follett didn't have the language of 'participatory methodologies' or 'dispute resolution mechanisms' or 'collaborative governance', but she was designing the foundations of the current concepts: integrative bargaining, problem solving approaches and principled negotiations. She was also describing future dispute resolution processes and techniques that would be come to be known as ICMS, as well as creating designer solutions to substantive social issues of the time (Menkel-Meadow, 2005, p.16).

Follett's ideas for a direct democracy were a non-starter with the 'men's club' of managerial science in her era (Kanter, 1995) and her bottom-up approach to management and change was viewed as a challenge to the rising state (Drucker, 1995), which sidelined her work for decades. Fisher and Ury (1981) who follow Parker-Follett in this chronology were reacting to the real politics and increasing reliance on litigious processes throughout 60's and 70's in America and did not draw directly on her work for their assessment of failing justice systems. This points to the significant vision of Follett's work, and the reality that state bodies, civilizations and communities have continually struggled with the what to do with user, citizen, or member feedback on programs or services.

4.1.2 THE FOUNDATIONS OF DSD

WILLIAM URY, JEANNE BRETT & STEPHEN GOLDBERG

In 1981, Fisher and Ury (1981) published the bestselling book *Getting to Yes* introducing psychology into the study of negotiation and conflict resolution with the concept of "principled negotiation", shifting negotiation into a frame of non-adversarial bargaining and interest-based problem solving. Interest-based problem solving was a process that reacted to the rights-based litigious processes that dominated the legal system in the 1960s and 70s. It received huge popularity and this publication remains one of the best-selling books in Alternative Dispute Resolution to this day. The drawbacks of this work were a lack of acknowledgment of systemic power imbalances that could influence negotiations between parties, as well as making assumptions about the capacity of parties to engage.

In the DSD literature, ‘Dispute System Design’ is a term originally coined by the ground-breaking work of Ury, Brett & Goldberg (1988) *Getting Disputes Resolved: Designing Systems to Cut the Costs of Conflict* (Bingham, 2008; Menkel-Meadow, 2005; Roche & Teague 2012). Their work built on the interest-based problem solving (Fisher and Ury, 1981), arguing for the design of dispute resolution systems who systematically focused primarily on interests (Amsler, Smith & Martinez, 2015, p. s10). See Figure 4 below for a visual depiction of this type of system design.

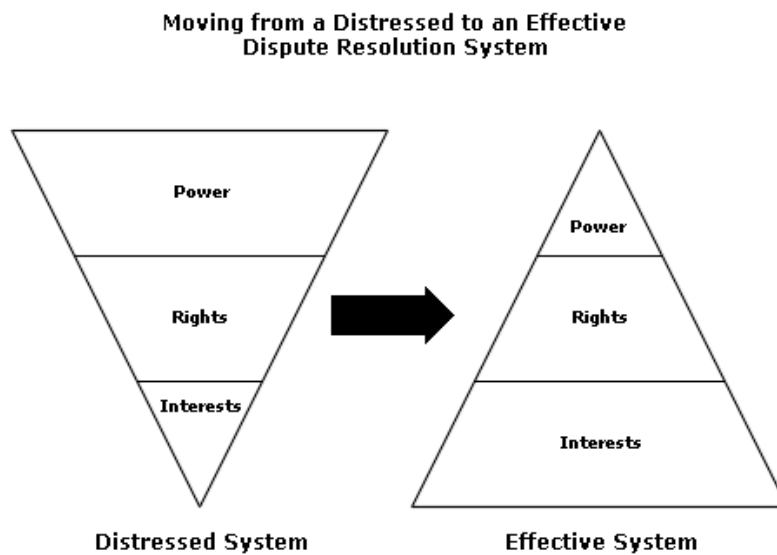


FIGURE 4 DISTRESSED VERSUS EFFECTIVE DISPUTE RESOLUTION SYSTEMS

As can be seen in the diagram above, they conceptualized three types of dispute resolution methods: “power-based methods”, such as lock-outs, strikes, or coercive sanctions; “rights-based methods”, such as collective agreements, or “interest-based methods”, such as mediation, facilitation or other joint problem-solving initiatives. Distressed dispute resolution systems focused on power-based methods, whereas effective dispute resolution systems focused on interest based and problem-solving methods first.

The authors conclude that processes for addressing conflict originated from a power-based design and power-based dispute resolution. Their work situated in non-judicial, non-adversarial dispute resolution systems as a mechanism complimentary and equal in value to the legal system. DSD was part of a trend to increase “access to justice” (MacFarlane, 2016) by decreasing legal fees, increase productivity and decrease emotional injury (caused from adversarial litigation). The goal

of DSD was to build a system in the workplace whereby the majority of disputes are resolved by reconciling interests.

As per Ury et al. (1988), the six design principles to build DSD are: 1. Put the focus on interests, 2. Build in 'loop-backs' to negotiation, 3. Provide low-cost rights and power backups, 4. Build in consultation before, and feedback after, 5. Arrange procedures in a low-to-high-cost sequence, 6. Provide the necessary motivation, skills and resources (p. 42). The authors proposed an “interest-based method first” dispute design, though they recognize the importance of providing low-cost backup of rights-based processes.

Three significant contributions emerged from the work of Ury et al. (1988) that are relevant to the future of DSD work. The first was the primacy of interest-based methods above rights or power-based decision-making. This philosophy would become cornerstone to all DSD frameworks that would follow. The second was the articulation of a (rudimentary) system of decision making where a user could ‘loop-back’ from rights to interest-based dispute resolution mechanisms. This idea of providing users with choice would also permeate DSD moving forward. Lastly, the authors proposed the importance of formally involving stakeholders in system design and evaluation in Principle 4 (Ury et al., 1988, p. 69-74; Roche & Teague, 2012). However, the inclusion of stakeholders was a one-off involvement and there was little explanation of how to identify “stakeholders”. There was no culture and context of both the individual accessing the system and the environment in which the system was being designed. Their DSD model was organization centric and an evaluation of success that was rooted in outcome factors such as decreased costs of conflict and organizational efficiencies and not based on user satisfaction. This theme of culture and context would not be picked up again in the literature until Hernandez-Crespo (2008), Amsler, (2017) and Amsler, Smith & Martinez (forthcoming).

Constantino & Merchant (1996) were the next set of authors to take the term Dispute System Design and develop a framework. They reacted to the work of Ury et al. (1988) with questions about the designer as authoritative “expert”, how linear they were in their approach to design, how they did not emphasize prevention, and how they overlooked organizational dynamics (Constantino & Merchant, 1996).

In their book, *Designing Conflict Management Systems: A Guide to Creating Productive and Healthy Organizations* (1996), Cathy Constantino & Christina Sickles Merchant took the notion of interest-based ADR systems described by Ury et al. (1988) and using organizational and systems theory, placed DSD into corporate organizations. The authors coined the term Conflict Management Systems (CMS) to describe the need for a specific dispute resolution subsystem that would fit into the larger corporate organizational system. The focus was on a system that that could offer efficient and cost-effective methods for dealing with conflict as it arises and reduce the costs to the organization associated with conflict (i.e. absenteeism, re-hiring, re-training, etc.) (p. 23).

The characteristics of a CMS include the presence of boundaries (policies, agreements, organizational structure), purpose (the resolution of disputes), inputs (the disputes to be solved), transformation (process of moving from impasse to results), outputs (ending of dispute), feedback (received from involved parties) (1996, p. 24-25). Through an acceptance of these characteristics, the authors outline the six guiding principles to consider in the design of an effective dispute resolution system. They are:

1. Develop guidelines for whether ADR is appropriate (including people, technology, culture and mission), (p. 121)
2. Tailor the ADR process to the particular problem (by using a variety of factors: goals of disputants, their tolerance for risk, relationship of disputants) (p. 124),
3. Build in preventative methods of ADR for parties to engage prior to potential dispute (p. 126),
4. Make sure that disputants have the necessary knowledge and skill to choose and use ADR,
5. Create ADR systems that are simple to use and easy to access and resolve disputes early, at the lowest organizational level, with the least bureaucracy,
6. Allow disputants to retain maximum control over choice of ADR method and selection of neutral wherever possible (p. 121).

Compared to Ury and Fisher (1981) these guidelines are more fully developed. However, the language used in these guidelines: “tailor” the process, “build” methods, “make sure” disputants have knowledge, and “create” accessible systems suggest a design process that is driven by an expert designer. The CMS that is “built” has a fixed status and not one that will adapt to changing

user needs. Moreover, though emphasis later in their text is placed on “designing with, not for” stakeholders (p. 20), Constantino & Merchant dropped Ury et al. (1988)’s Principle 4 (build in consultation before and feedback after) from their guidelines. Constantino & Merchant’s concern is focused on their need to have choice on the ADR process for users, but not the system design. They do recognize users as recipients of a service but not in the design or future innovations of the system. The major drawback to the work of Constantino & Merchant (1996) is the unquestioning authority that is rendered to the DSD designer (p. 216).

The unique contribution of this work is twofold. The first is that Constantino & Merchant want to get at the root cause of the conflict, emphasizing the idea to “get on the table what is underneath it” (p. 199). The authors suggest there can be resistance to CMS (such as fear, discomfort, etc.) as well as constraints (structural limitations, lack of leadership, resources, etc.). They are speaking not only to the importance of uncovering and valuing each party’s interests in the conflict resolution process, but also using stakeholder information to inform the various process options. They have emphasized that user needs will drive the processes that are used in the CMS; however it is curious that this is not included in a guiding principle for designing the system mentioned above.

The second significance of their work is the extensive reach they had in future contexts including courts (Fader, 2008), administrative justice (Bondy & Le Sueur, 2012), international relations (Hernandez-Crespo, 2017a), institutional analysis (Shariff, 2003; Bingham, 2008), along with future Analytic Frameworks (Smith & Martinez, 2009; Gill et al., 2016).

The next set of authors developed a concept called Integrated Conflict Management Systems, which took Constantino & Merchant’s framework and added the idea of “integration”. By adding in this value, the authors attempted to address the root causes of conflict.

4.1.3 INTEGRATED CONFLICT MANAGEMENT SYSTEMS

LIPSKY ET AL.

Integrated Conflict Management Systems (ICMS) is a conflict resolution system that “goes beyond traditional channels... to include other options” that provide multiple complimentary approaches for both preventing and managing conflict (Rowe & Bendersky, 2003, p. 120; Gadlin, 2005;

Lipsky, Seeber & Fincher, 2003). Lipsky (2015) claims the concept of ICMS crept into the literature in the 1980s, introduced by Rowe, Ewing and others (Ewing 1989; Rowe & Baker, 1984; Rowe 1997) (p. S29). Gosline et al. (2001) define an integrated approach to CMS as one where employees can file complaints about the quality of their work environment, not just about contractual complaints or collective rights, but one where an employee has multiple options to address an issue, along with the organization promoting a culture of healthy conflict, and the presence of structures in place whose sole purpose is to manage the CMS (p. 9). Including the principle of “integration” encourages DSD to get at the root causes on conflict and address them through the use of prevention, management and resolution mechanisms that provide systematic change (Gosline et al., 2001).

Lipsky, Seeber & Fincher (2003) refined the field of ICMS with their text *Emerging Systems for Managing Workplace Conflict* which drew on research into CMS set up within Fortune 1000 companies and the publication *Designing Integrated Conflict Management Systems: Guidelines for Practitioners and Decision Makers in Organizations* by 11 chair members that included Lipsky, Gosline, Stallworth, Rowe and other prominent academics in the field. Lipsky, Seeber & Fincher (2003) described the importance of taking an integrated approach to addressing conflict due to the variety of ways conflict could cost an organization including: 1. The direct costs (money and time), 2. The indirect costs (impact on bystanders), 3. The opportunity costs (resources directed towards conflict resolution that could have been directed towards other endeavors), and 4. the psychological/emotional costs (Lipsky, Seeber & Fincher, 2003, p xii-xiii.). The business case for ICMS is similar to the explanation given by Constantino & Merchant (1996) above, where the case is made for the interests of the organization and not in the interests of those users who are seeking redress. This observation is a significant drawback as it begins to describe the design of systems that are not human-centered but reflect the needs of businesses or organizations at the centre of the construction of DSD.

The unique contribution of ICMS literature is that it provided the most exhaustive style of systems to date for addressing workplace conflict. Lipsky, Seeber & Fincher (2003) expanded the definition of “conflict” to include latent, emerging and manifest conflict (p. 9; Leakey, 2018, p. 16). The development of ICMS was designed to recognize a widened understanding of conflict and strive to put human’s complex experience at the centre of the design process (though not the humans

themselves). The authors suggest ICMS can be applied to a variety of sectors (including public, customer or client relations) (Gosline et al., 2001, p. 6). The significant limitation of this work is the assumption that ideas developed within a private sector context, could easily and seamlessly translate to other types of public sector organizations. Because of this, the literature still places organizational needs, profits, and efficiency as the most important values to the design of an effective ICMS. At the time, and through the 1980s, 90s and into 2000, New Public Management was dominating the public sector. This enabled ICMS to easily integrate into public sector organizations.

The next set of authors focus their work specifically on the use of DSD in institutions: Shariff (2003), followed by Ostrom (1990) and Amsler (formerly Bingham, 2008; 2017). Shariff (2003) reacted to the suggestion made by CMS and ICMS that DSD could have utility within public institutions and pushed this idea further with the introduction of the theory of institutionalism.

4.1.4 INSTITUTIONAL DSD

KHALIL Z. SHARIFF

Shariff, a lawyer at the time with the Harvard Negotiation Research Project, blended DSD with the theory of institutional design in public organizations for his article *Designing Institutions to Manage Conflict*. The author builds upon literature from Ury et al. (1988) and Constantino & Merchant (1996) to define Seven Design Principles for institutions looking to build institutional responses to managing conflict (see Table 2 below). Shariff (2003) goes beyond the application of DSD to individual behavior seen thus far in the literature and applies an understanding of how public institutions act and govern collective social behavior to describe how institutions can be designed to transform societal-wide responses to conflict.

TABLE 2 SUMMARY OF DESIGN PRINCIPLES FROM SHARIFF (2003)

Variable	Principle
Membership	Principle 1: Institutions should strive for inclusiveness by incorporating into their structure all stakeholders likely to be affected by the institution's work.

Scope	<p>Principle 2: Institutions should seek broad coverage of many related issues of interest to the institutional membership rather than being limited to a specific or narrow issue area.</p> <p>Principle 3: Institutions should seek depth of jurisdiction on individual issues areas such that they are empowered to take many kinds of action on issues within their mandate.</p>
Centralization	<p>Principle 4: Institutions should seek to build central sources of information gathering and dissemination.</p> <p>Principle 5: Institutions should decentralize and proliferate discussions and conversations among institutional members in multiple forums and forms.</p>
Control	<p>Principle 6: Institutions should vest control over decisions in those most interested and affected by them.</p>
Flexibility	<p>Principle 7: Institutions should embed opportunities for regular review of principle design decisions in order to integrate learning from experience.</p>

These five key variables were a first attempt at generating dispute design principles that could be used to develop a dispute system within an institution. They were intended to guide the work of institutional designers to build joint problem solving and collaboration, and other qualities the DSD literature points to as effective conflict management strategies, into the foundation of the institution. The unique contribution of this work is a recognition of DSD in not just improving individual behavior as had already been developed in the DSD literature, but in the design of public institutions such as legislature, administrative agencies, city councils and courts. Shariff explicitly refers to broadening their understanding of how conflict can spread to involve many people (Principle 2), including all of these stakeholders (Principle 1), increasing system members (Principle 5), and decentralizing control (Principle 6). The author pushed DSD towards a more human-centered approach, through the recognition that building public processes requires involvement of citizen voice.

The author understood DSD to create more justly constructed collective decision making and problem solving (p. 134). Though the author focused extensively on the importance in Principles 1 & 2 (see above) that describe the inclusion of stakeholders, the paper does not address the implicit power that will remain vested within the existing institution. The significant drawback of this work is the lack of attention to the vested power structures within the institution, or the larger institutional system it rests. The ability of DSD to move beyond these existing structures to challenge the issue of power is a recurrent theme in the literature and will be more developed in the ‘Synthesis’ section below.

The next author pre-dates the work of Shariff (2003), however Elinor Ostrom is placed in this order as she significantly set up the contributions of the following author Lisa Amsler. Shariff, Ostrom and Amsler all write about the context of public institutions and are connected in this genealogy together to track the integration of institutional theory into the literature on DSD.

ELINOR OSTROM

Though she is not explicitly known as a DSD scholar, Elinor Ostrom’s work in the field of institutionalism and political economy generated a tool called the Institutional Analysis and Development Framework (IAD) (Ostrom, 1990, 2005, 2011). The IAD is a description of the characteristics of public institutions created by humans to manage common-pool resources (Ostrom, 2011, p. 12-17). This tool is relevant to the understanding and analysis of DSD within institutions because it provided an understanding of institutions developed by humans to oversee the sharing of their resources and the strengthen good governance (Bingham, 2004, 2008, 2010). To design sustainable management systems for sharing common resources, Ostrom (1990) explains there are eight design principles for the institutions including, “clearly defined boundaries of the resource and clearly defined rights of individuals who can take it, proportional equivalence between benefits and costs, collective choice arrangements, monitoring, graduated sanctions, conflict-resolution mechanisms, minimal recognition of rights to organize, and nested enterprises in which appropriation, enforcement, monitoring, conflict resolution, and governance are nested in layers” (Bingham, 2008, p. 20; McGinnis, 2011, p. 180; Ostrom, 1990, 2011).

Dispute resolution systems are seen as a type of ‘institution’ described by Ostrom that are aimed at preventing, managing or resolving conflict (Amsler, Martinez & Smith, 2015, p. S18) and the

IAD is a framework used to examine the design of dispute resolution systems (Bingham, 2004, 2008, 2010). The IAD is significant to mention in a chronology of DSD as it locates DSD into these larger overarching organizations, systems, and understandings of justice described by Ostrom. The IAD can support the management and design of dispute resolution systems in complex organization and institutional contexts through its interdisciplinary understanding of rules that govern institutions created for collective choice making (Hernandez-Crespo, Lipsky, Nabatchi, & O'Leary, 2018, p. 19).

As Lisa Amsler (formerly Bingham) will draw attention to below, strengthening good governance and participatory processes are integral forms of dispute resolution. Amsler sees the institutional rules and components described by Ostrom as providing a systematic and consistent way of comparing how different DSD design choices generate different justice outcomes.

LISA AMSLER (FORMERLY BINGHAM)

Lisa Blomgren Amsler (formerly Bingham) is a legal scholar contributing scholarship to the field of DSD through her interdisciplinary work in collaborative governance, public administration, institutional analysis, organizational theory, law and conflict management (Hernandez-Crespo, et al., 2018, p. 1). Bingham's (2008) article *Designing Justice: Legal Institutions and Other Systems for Managing Conflict* was paramount in the evolution of DSD by deepening the understanding of what it means to 'design justice' through the use of the IAD to build and evaluate DSD. Her list of variables that define an effective DSD to 'design justice' are: the type of sector or setting, overall type of dispute system design, subject matter of conflict, participants, timing of intervention, voluntary/mandatory, nature of intervention, model of practice, sequence of interventions, cost, funding, training, due process rights, structural support, and level of participants self-determination (Bingham, 2008, p. 12-14). The significance of Bingham (2008)'s work was how explicitly she recognized DSD's location within the context of institutions as a method of 'designing justice' and her ability to make a case for DSD in all upstream, midstream and downstream arrangements of governance.

Though her work has evolved over the past 15 years, significant contributions from Amsler (2017) include: calls for building accountability through program evaluation, a shared understanding and definition of 'justice' in DSD, and transparency with users of dispute systems as to how systems

are built and operate (Nabatchi & Bingham, 2010; Amsler, Avtgis & Jackman, 2017; Amsler & Sherrod, 2017, p. 170). Most recently, she also draws attention to the role of culture and context in existing DSD frameworks, as important components to be isolated for within design and accountability processes. Amsler (2017) enhances the Analytic Framework for DSD described by Smith & Martinez (2009) to include culture & context as their own analytical criteria:

Culture and Context:

- How does the context of DSD affect its viability and success?
- What aspects of culture (organizational, social, national, or other) affect the workings of the system?
- What are the norms for communication and conflict management? (p. 173)

These questions provoke important curiosities for the designer that impact a system design. Amsler (2017) points to the importance of considering culture and context in the development of DSD for transitional justice and transitional democracies along with international investment treaties that continue to grow in prevalence amongst a globalized world (p. 174). However, she writes from the perspective of a legal scholar, placing rights-based processes as integral, if not foundational to the design and requiring the designer's skillset to include legal training. If the lawyer remains at the center of the design process, the ability to make space for power and culture remains unclear.

The next author Marianna Hernandez-Crespo takes variables that define an effective DSD described by Bingham (2008) and applies them to a community development context. Through the process of designing justice in this context, Hernandez-Crespo (2008, 2017a, 2017b) furthers the role of power, culture and context in DSD.

The next set of authors drew on the proliferation of CMS and ICMS theory and practice that was enabled by the wide use of these systems into organizations, to refine and generate an Analytic Framework for DSD. By the time Smith & Martinez (2009) published this framework, ADR had been widely acknowledged as useful across many types of organizations and institutions and had uptake in judicial systems. These authors are the first in a category titled the expansion of DSD.

4.1.5 THE EXPANSION OF DSD

STEPHANIE SMITH & JANET MARTINEZ

In 2009, Stephanie Smith & Janet Martinez developed the Analytic Framework for Dispute System Design to refine a wide variety of DSD professionals, legal scholars, and student's effect and impact on designing dispute resolution systems. Building on Ury et al. (1988), Constantino & Merchant (1996), and the ICMS literature (Gosline et al., 2001; Rowe & Bendersky, 2003; Lipsky, Seeber & Fincher, 2003), Smith & Martinez (2009) created a handrail for DSD designers to systematically approach the assessment of existing formal or informal conflict management systems or processes, and a pathway towards the design or redesign of quasi-judicial DSD. The need to systematize its design pushed Smith & Martinez (2009) to create an Analytic Framework identifying the most important factors in DSD that could be applied to multiple industries and used by a wide variety of designers.

The Analytic Framework focuses on the five most important factors to guide the identification, organization and categorization of a dispute system as seen in Table 3 below. Under each factor are a set of questions that designers may consider. These factors are: Goals, Structure, Stakeholders, Resources and Accountability (p. 129).

TABLE 3 SMITH & MARTINEZ (2009) ANALYTIC FRAMEWORK

THE ANALYTIC FRAMEWORK³¹	
1. Goals	
a)	<i>Which types of conflicts does the system seek to address?</i>
b)	<i>What does the system's designer seek to accomplish?</i>
2. Processes and Structure	
a)	<i>Which processes are used to prevent, manage and resolve disputes?</i>
b)	<i>If there is more than one process, are they linked or integrated?</i>
c)	<i>What are the incentives and disincentives for using the system?</i>
d)	<i>What is the system's interaction with the formal legal system?</i>
3. Stakeholders	
a)	<i>Who are the stakeholders?</i>
b)	<i>What is their relative power?</i>
c)	<i>How are their interests represented in the system?</i>
4. Resources	
a)	<i>What financial resources support the system?</i>
b)	<i>What human resources support the system?</i>
5. Success and Accountability	
a)	<i>How transparent is the system?</i>
b)	<i>Does it include an evaluation component?</i>
c)	<i>Is the system successful?</i>

For Smith & Martinez (2009), the first factor Goals looks to uncover what kind of conflict the DSD is hoping to address and what outcome the system is seeking to accomplish. Uncovering the goals will identify the full scope of an organization's outstanding needs and desired outcomes along with stakeholder tensions to ensure the parts of the DSD addresses each unique, yet intersecting aspect of the organizational system (p. 130). The authors ask what the "system designer" seeks to accomplish, yet they do not ask the same question to the "system user" at this initial stage of design.

'Process and Structure' involves the identification of mechanisms that will be used to prevent, manage and resolve the dispute. This involves the internal processes and structures to be utilized in the DSD, as well as the processes and structures that intersect external to the system. Here Smith & Martinez are taking seriously and carry through the notion of "integration" that was emphasized in the ICMS literature (Gosline et al., 2001; Rowe & Bendersky, 2003; Lipsky, Seeber & Fincher, 2003). Examples of system integration include the marriage of DSD and the formal legal system, labour union, legislatures, the financial system, or other processes that may be linked or integrated to the DSD.

The next factor ‘Stakeholders’ includes all invested, involved, or implicated parties and considers their relative power and vested authority. Stakeholders include, “the immediate parties in conflict, individuals or entities subsidiary to or constituents of those parties, or others directly or indirectly affected by the dispute's outcome” (p. 131). Typically, the more stakeholders included, the more likely a system is, “to garner credibility and produce durable outcomes” (p. 131). Smith & Martinez draw attention to not only the inclusion of all stakeholder groups, but what the relative power of each are and how that will be played out in the dispute system. This reference to relative power of multiple users is a unique contribution.

Factor four, ‘Resources’, is an assessment of the financial or other resources that exist to support the operation of the DSD. The funding body of a system has a large implication over what the desired outcomes of the system turn out to be. ‘Success and Accountability’ is the last factor, where an understanding of what accountability looks like, to whom, and how the system ensures its impact. The authors indicate that success is best understood by independent evaluators or auditors who can objectively define and understand what the ‘success’ of a system could look like, as “measured against its intended goals, as well as other relevant legal and societal norms” in a summative evaluation (p. 132). Smith & Martinez point towards the opportunity for evaluation to improve system delivery, along with the improving the credibility and participation in the DSD with the inclusion of system user feedback. However, this inclusion of stakeholder feedback in summative evaluation does not provide the user with the same access and influence of the design process as seen within a human-centered design approach that places user feedback as crucial and iteratively involved from the first design choice. There is no incentive provided for the designer or system manager to take the feedback of users into consideration; Smith & Martinez only point towards its possible value, not required use.

The unique contribution of this work is that it draws on literature from multiple different organizations, jurisdictions, and sectors, and provides a widely accessible framework for DSD designers and students to begin to consistently conceptualize DSD in a similar fashion. As time evolved, the authors began to recognize the importance of “Culture & Context” that was not included in the original Analytical Framework (Amsler, 2017, p. 172-173; Amsler, Smith & Martinez, forthcoming; Martinez, Conrad & Moran, 2016). When one considers the roots of DSD in its historical context of a neo-liberal approach to labour, law and governance, the act of isolating

a system user from their context and viewing them as a ‘rational’ decision maker separate from systemic or cultural influences is understandable given the context. However, the authors overlook this political/economic context that impacts a user’s capacity to navigate the DSD system. Though the authors describe the importance of including stakeholder voice in the design process (p. 131), they ignore the characteristics that provide more relevant and just outcomes. Smith & Martinez have collaborated with Lisa Amsler to address this issue and add “Culture & Context” as a sixth element, restructuring the framework into six categories (Amsler, Smith & Martinez, forthcoming).

The authors also suggest the employment of an external evaluator to define the ‘success’ of the system, separating the roles of the designer and evaluator from the rest of the stakeholders, pointing towards an imbalance of power distorted towards the designer (p. 132). The sole authority of the designer as evidenced through their decision-making power over the design process is an inherited concept from DSD’s foundational literature (Ury et al., 1988; Constantino & Merchant, 1996). Designer characteristics and power in DSD will be described in the following sections below.

The next author takes the variables that define an effective DSD described by Bingham (2008) and applies them to a community development context. Through the process of designing justice in this context, Hernandez-Crespo (2008, 2017a, 2017b) furthers the role of power, culture and context in DSD.

MARIANA HERNANDEZ-CRESPO

Similar to Amsler (2017), Hernandez-Crespo (2008, 2017a) stresses the role culture and power play for the design of dispute resolution mechanisms in the international DSD context. The author states that despite a system’s design on one continent, it remains likely that through integrated technological or capitalist channels that the system could be accessed by another party from a different continent and culture. All systems therefore need to be reflective of the power inherent in culture in which the users are embedded, as well as how cultures intersect with the system. The author stresses the positive outcomes that ensue from interconnection between the globalized world when providing effective dispute resolution mechanisms to foster these political, social or business relationships. DSD has the potential to counter moments of unbalanced power, and when

designed well, it can incentivize economic investment and strengthen business relationships between developing nations and foreign investors, contributing to innovation and growth.

Mariana Hernandez-Crespo (2011) discusses collaborative methodologies for designing DSD in cross cultural contexts. These concepts are unique to investment ventures in developing countries to support enhanced interactions between foreign investors and host states, called Shared Decision Systems Design (SDSD) and Culture Sensibility Frameworks (CSF). They are intended to level the power between local organizations, community interests and international foreign investment programs or organizations (Hernandez-Crespo, 2010, 2017a, 2017b). Hernandez-Crespo draws heavily on Bingham (2008) and Nabatchi & Amsler (2014), that discuss DSD, collaborative governance and public participation to strengthen the investor, state and community relationships through “participatory processes put in place to promote public decision-making of systemic impact” (Hernandez-Crespo, 2017a, p. 556). Through Hernandez-Crespo’s application of DSD to the community context, the author was compelled to recognize the influences of culture within the creation of an effective system. This literature is significant as Hernandez-Crespo was the first to explicitly reference the role of culture and the ensuing power dynamics in the design of dispute resolution systems. The publication of her work illuminated the gaps in literature for other interdisciplinary fields such as DSD within organizations, institutions and particular economic (e.g. capitalist) systems. When the analysis of DSD remains in an institutional, organizational or capitalist context it lacks attention to culture and context, suggesting it is easier to overlook or isolate for in these contexts. Hernandez-Crespo’s work displays that integrating citizen or user input into the design ensures acknowledgment of culture and context.

The next author applies DSD to the context of micro-justice prescribing 5 steps a DSD must take in the design process for this context. Barendrecht’s work is quite unique from the international context of Hernandez-Crespo, yet it displays the growing influence of not only DSD into multiple sectors, but into multiple levels of governance as well.

MAURITS BARENDRECHT

Professor Barendrecht (2009a, 2009b) pulls concepts from microeconomics and economic institutionalism together with DSD to discuss five proposed steps to design a systematic dispute resolution for maintenance of long-term relationships within governance structures. The five-step

model for designing dispute systems are: Meet, Talk, Share, Decide and Stabilize. See Figure 5 below. Initially, the parties Meet in a centralized forum to share information, motivated by higher costs of fighting than benefits of participation. Next, the parties Talk, through negotiation or other facilitated methods, to engage in an interest based, integrative negotiation. After talking, the parties Share by discussing the rules, norms, objective criteria, or other information that enables equitable understanding of the dispute. Next the parties Decide by following a decision-making procedure to develop an option for next steps. Finally, the parties look to stabilize the relationship through transparency, clarity and making the costs and benefits of compliance higher than those of non-compliance.

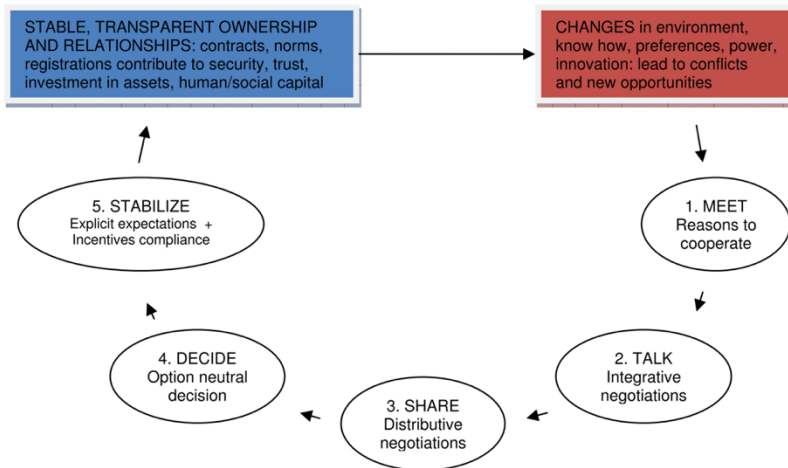


FIGURE 5 BARENDRECT (2009B) FIVE-STEP MODEL FOR DESIGNING DISPUTE SYSTEMS

Barendrect (2009b) views the user of the dispute system as a rational consumer in the free market, where the market favors those who are more powerful, and typically wealthy (p. 16). Therefore, Barendrect (2009b) states DSD must be designed to ensure access to justice is affordable for all who require it. The author acknowledges the discrepancies of power amongst users who are in the process of seeking justice, beyond simply the power differentials that exist once a user enters into a justice system that Constantino & Merchant (1996) and Ury et al. (1988) intended to address. The shortcoming of Barendrect’s work is the assumption of the user as a rational consumer and as such capable of making logical choices. Issues such as power, trauma, coercion, or other influential variables are not relevant within this model. The author introduces the idea of ‘fairness’ evaluated

by due process and the outcomes aligned with wider acceptable norms and code of behavior, rather than the reported perceptions of the individual parties. The author puts forward a framework to guide the steps of dispute process, however he does not acknowledge the influences of user capacity or existing power dynamics on the user in the designing process or while using the system.

The next author also uses the access to justice lens to examine the procedural steps of building a DSD. Macfarlane is looking at the equity of the justice in the outcomes at end the of the DSD, as opposed to the equity of accessing the systems that Barendrecht is concerned about.

JULIE MACFARLANE

Canadian a legal scholar and practicing ADR professional Julie Macfarlane (2016), narrates an essay titled ‘Chapter Seven: Designing and Evaluating Dispute Resolution Systems and Processes’ in the 4th edition of the textbook *Dispute Resolution: Readings and Case Studies*. In this chapter, Macfarlane (2016) synthesizes insights from Bingham, 2008; Lande, 2007; Constantino & Merchant, 1996; and Ury et al., 1988 to describe her four key design steps for any area of DSD: 1. Problem diagnosis, 2. Designing outcome objectives and goals, 3. Consulting stakeholders, and 4. Educating and motivating clients. Through the explanation of these key steps, she makes the distinction between process design and system design in a DSD (p. 824-825). Process Design refers to the function and process of a one-off dispute intervention, whereas System Design refers to the institutional creation of dispute resolution mechanisms that will be used by an institution on more than one occasion and include multiple of different processes for a variety of disputes (Gill et al., 2016). This was a significant contribution to the literature that will be picked up by future DSD authors including Gill et al., 2016.

The other significant contribution of this work comes from the unique ‘Access to Justice’ lens the author brings to this work. She draws attention to the inherent competing goals within the DSD. They show how the goal of efficiency and cost savings are in competition with the goal of increased access to justice, fairness or addressing systemic issues (Macfarlane, 2016, p. 832-835). She asks what ‘goals’ are at the center of the design process: the need to prioritize between “the efficiency in addressing disputes [or] generating high satisfaction outcomes” (p. 833); should it be the organization’s or the user’s goals that take priority, because they conflict and cannot be addressed simultaneously. Macfarlane’s work responding to the third wave of the Access to Justice

movement, which looks to create justice alternatives and simplify the justice system (Currie, 2003), pushing an approach to dispute design that is more user centric.

The next set of authors follow MacFarlane chronologically, but focus on the field of administrative justice focusing on redress and complaint mechanisms in the UK. This demonstrates the wide reach of DSD and what the next set of authors recognize as now beginning to hinder the systematic usefulness of the practice.

VARDA BONDY & ANDREW LE SUEUR

Bondy & Le Sueur (2012) are concerned with the fragmented, adhoc and unconscious dispute design that dominates in the United Kingdom (UK). They focus on DSD in the administrative justice field through their research into redress mechanism designs to report grievances against public bodies developed in the UK. The authors propose nine principles for redress design based on their observed lack of consistency amongst European DSD. The principles are: 1) presumption of an effective pathway and remedies for addressing disputes, 2) design should respect constitutional principles, 3) there should be public accountability for the dispute system, 4) design based on evidence, 5) opportunities for grass root innovations, 6) ensure value for money and proportionality, 7) good fit between grievance and redress mechanism, 8) fair and rational criteria and processes to filter inappropriate grievances, and, 9) redress design should lead to wider improvements in public services (Bondy & Le Sueur, 2012). See Table 4 below.

TABLE 4 NINE DSD PRINCIPLES BY BONDY & LE SUEUR (2012)

The first three principles relate to the constitutional context: they are premised on the idea that redressing grievances is a constitutional activity – it conditions the relationship between citizens and the state	
Principle 1	There should be a presumption in favour of all administrative decision-making schemes making an express provision in legislation for effective pathways and remedies for addressing grievances.
Principle 2	The design of grievance redress mechanisms should (i) include processes for considering compatibility with principles and rights protected by the British constitution and Convention rights and (ii) should be compatible with them.
Principle 3	Grievance-handlers should be held to account for their work. A design of a grievance- handling system should facilitate accountability by considering the methods of accountability and the ‘audience’. The

	appropriate mix of accountability mechanisms varies according to the context in which a grievance system operates.
The next two principles about the process of design	
Principle 4	Where a new grievance redress system is being created, or an existing one reformed, policy-making should be informed by evidence and research.
Principle 5	There should be opportunities for grass-roots innovation.
The remaining principles focus on the substance of the design	
Principle 6	The design of a grievance handling system should ensure that the costs of creating, running and using a grievance redress system provide value for money and are proportionate.
Principle 7	There should be a good ‘fit’ between the types of grievance and the redress mechanism.
Principle 8	It should be anticipated that if a redress mechanism is created it will be used by (i) people who have complaints that are obviously without substance and (ii) by people who may have a legitimate grievance but who are seeking to raise it using the wrong mechanism. Fair, rational and effective ‘filters’ should be put in place.
Principle 9	As well as resolving individual grievances, redress mechanisms should contribute to improvements in public service by providing opportunities for public bodies to learn lessons.

Through the collection of their data the authors observed the key actors for design activity are those typically piecing together redress systems include government departments, legislatures, local authorities, the judiciary, Ombuds schemes, and arms-length advisory bodies (Gill et al., 2016, p. 445). Each of these actors operate in unique contexts and have different means and goals for their system, which has led to a collection of DSD across the UK that are ad-hoc and unconsciously designed within and across sectors. The unique contribution of Bondy & Le Sueur is this observation of the fragmented state of DSD and the creation of nine principles that aspire to unify the practice.

The next set of authors were the first to release an entire textbook with a singular focus of DSD. They were reacting to similar observations of Bondy & Le Sueur, surrounding the extensive reach of DSD and the magnitude of uptake it has received. Instead of critiquing this DSD as unconsciously and unsystematically designed, Rogers, Bordone, Sander, & McEwen bring

together literature and research on DSD to provide a teaching tool to systematize the understanding of DSD for designers.

ROGERS, BORDONE, SANDER, & MCEWEN

In 2019, Rogers, Bordone, Sander, & McEwen released the second edition of their textbook *Designing Systems and Processes for Managing Disputes*, dedicated solely to the growing field of Dispute System Design. The first edition was released in 2013. As experts in the field of DSD, the authors drew on their professional insight and academic knowledge of the foundational DSD literature to develop a framework of the basic steps designers should take in their DSD work. The significant contribution of this work was the wide body of literature and case studies synthesized to build this resource.

Interestingly, they began to point towards the necessity of collaboration within the design process, dedicating “Chapter 4: Diagnosing or Assessing Stakeholders, Goals and Interests, and Contexts” to it. The authors propose three steps to effective Collaborative Design necessary for DSD: 1. Whenever possible include all stakeholders in the design process; 2. Avoid being presumptuous about what the interests of a particular stakeholder group might be; 3. Practice humility in your work with clients and stakeholders alike (p. 135). Rogers et al. are emphatic that leaving out system participants of the design process could cause the system to lack effectiveness, fairness or legitimacy, indeed, there could be a key participant who is unable or unwilling to participate in collaborative design, and their absence should still be taken into account (p. 170). Recognition of the value of system participants in the design process is key and they go on to emphasize the importance of working collaboratively with multi-perspectives to deepen the design, however, the designer remains positioned as expert throughout the design process (p. 135). For example, they assert that part of the designer’s role is to “devise strategies” that entice parties to use the processes made available (p. 164). The authors still view the designer as exercising control over users to ensure engagement instead of enabling user feedback to guide the strategies to support their participation in using a DSD system.

The last and final set of authors in this chronology are Gill et al. (2016). These authors narrow the focus of this analysis to the area of DSD for consumer-to-business disputes. Their work assessed the scope of DSD in this area and provides an Analytic Framework to systematize design choices.

Gill, Williams, Brennan & Hirst (2016) have developed an Analytic Framework for consumer-to-business disputes in response to the 2013 European Union’s Directive on Alternative Dispute Resolution requiring the implementation of specific principles to ensure consumer voice is upheld in all cross-border business disputes (Directive on Consumer ADR, 2013). Gill et al. (2016) drew on authors Bondy & La Seuer (2012) and Bingham (2008) to develop a framework that addresses the ad-hoc nature of DSD and to ensure a systematic way to provide justice for consumers (p. 447). The Framework acts as a potential resource for practitioners both inside and outside the CDR field who are undertaking DSD initiatives in an attempt to synchronize the “fragmented” field of CDR in the EU (Gill et al., 2016, p. 445). The authors describe the shortcomings of existing DSD models that take a normative stance on conflict management design, advocating for empirically established and interest-based dispute processes (p. 440). See Figure 6 below for Gill et al. (2016)’s dispute system design model for consumer redress.

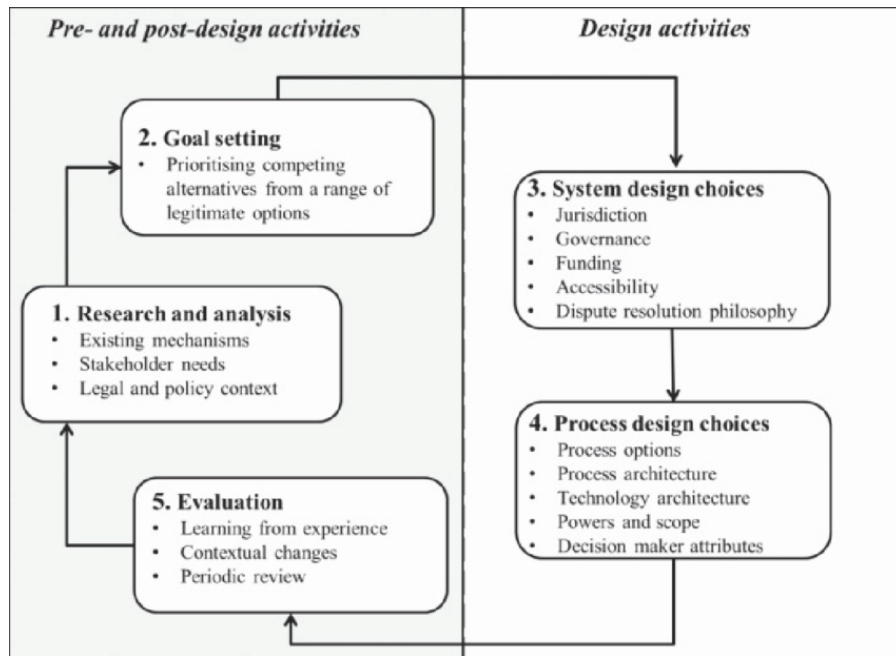


FIGURE 6 GILL ET AL. (2016) DISPUTE SYSTEM DESIGN MODEL FOR CONSUMER REDRESS

This framework splits the design into activities that focus on pre- and post- process design, on the left side of the model (Research and analysis, Goal setting and Evaluation), and design activities

on the right side of the model done during the system design (System design choices and Process design choices). Particular attention is paid to the Design Activities, which are undertaken in step 3 & 4. The authors advocate for flexibility and sensitivity to the unique context of CDR, as approaching the context as uniform or stagnant is neither desirable nor realistic (p. 463). Gill et al. (2016) illustrate a framework that calls for stakeholder consultation and involvement from the outset (as evidenced in Step 1) and allowing human needs and concerns to sit closer to the centre of the overarching goals of the DSD (p. 452).

The significance of this work was the creation of an accessible framework to make reasoned choices for DSD in the consumer-to-business disputes, as well as for DSD in the wider justice system. The authors position the framework as possessing utility outside the consumer-to-business dispute context (p. 463). The authors do not explicitly require that the designer possess legal expertise, though they are positioned as the driver in the design process. The authors are explicit about the importance of user involvement; however, though the framework alludes to evaluating contextual changes and legal and policy context, a significant drawback of this work is that they do not allude to the role of power or culture in the design process.

4.1.6 SUMMARY OF FINDINGS

The following summarizes the findings of the genealogical analysis. They describe the larger, overarching themes that emerge from the data (DSD models and frameworks) when considering how DSD principals have evolved. The first, is that the designer is hired by the corporation or organization leadership rooting the system's goals in a managerial paradigm and organizational or corporate needs. MacFarlane (2011) points this out, acknowledging the how there are competing priorities between the cost savings and efficiency goals for an organization, with the system's users goals of access to justice, fairness and addressing systemic issues. The second finding, DSD only recently introduced concepts of power, culture and user context. Hernandez-Crespo (2011) application of DSD to the international, community development context was pivotal in an analysis of locating the user's influence as integral to the design process. Hernandez-Crespo illuminated the influences of culture within the construction of a dispute resolution system and suggested that integrating user voice into the design is a way of acknowledging culture and context. Other authors have recently included culture and context in their design principles including Amsler (2017) and

Amsler, Smith & Martinez (forthcoming). Lastly, DSD is collaborative in nature, but not Human-Centered. Gill et al. (2016) published one of the most recent DSD models that necessitates stakeholder involvement, however it only mentions user involvement in pre and post activities, not during design process. This displays that in DSD, there are only Tokenistic involvement of users.

The next section will take the genealogical analysis made of the DSD literature and synthesize it with a human-centered design lens. It will analyze the HCD principles present in the data. The concepts of iteration and designer characteristics are unique to HCD and thus require further understanding and exploration around how they can influence the work of DSD.

4.2 Critical Analysis of DSD Genealogy

The following section is dedicated to further analyzing the DSD genealogy just described. It uses critical analysis to synthesize themes in the DSD literature, pulling from it two substantial concepts that require further exploration. These themes arise when the entire DSD chronology is considered together with the principles and values of DT. The first is the impact of multiple iterations and the second are unique designer characteristics. Each of these themes are explored further as they offer insight to the tensions that exist within DSD and the value that HCD and DT can provide future DSD.

4.2.1 THE IMPACT OF MULTIPLE ITERATIONS

Iterative design, or the use of prototyping by human-centered design thinking, as described in the Literature Review, provides the opportunity to bring the user into the idea creation and testing process in a deliberate and continuous way. The user, or their feedback, becomes central to the design process and they are able to input in more than tokenistic ways. As described by Gill (2018), the purpose for complaint systems or systems of redress within an organization can either be driven through an understanding of systems as mechanisms of control or disruptive innovation. Design thinking describes a process where DSD is centered in the values of innovation and user voice as opposed to organizational needs of efficiency and cost savings as described in the DSD literature (Ury et al., 1988; Constantino & Merchant, 1996; Lipsky, Seeber, Fincher, 2003). Using this methodology, it is possible for complaint systems to be re-imagined in such a way where they can

move beyond mechanisms of state or organizational control. This section will focus on how the value and activity of iteration used in the DT process can support DSD to include more user voice and overcome risk aversion, the top down approach taken in DSD design, and the typically summative evaluations that are used to illicit user feedback (if done at all).

Kimbell (2015) discusses her observations working as a designer in the Cabinet Office of the UK government's Policy Lab where the design team enabled public servants and stakeholders to collaborate on design projects which explored problems and generated solutions through iterative learning cycles (p. 214). The inclusion of user voice was done through, "interviewing or doing field studies of users, creating personas, visually mapping customer journeys, making and reviewing mock-ups of future services, devices or artefacts, organizing cycles of feedback and iteration, and stakeholder engagement" (Kimbell & Bailey, 2017, p. 215). Iterative design can come in a number of different forms all of which sit at the core of the Ideation Phase (Brown, 2009). The use of DT necessitates the design process to, "fail often and early" (Brown, 2009) by learning from each prototype's shortcomings. Coughlan, Suri & Canales (2007) call these 'micro-failures', used to continually test, evaluate and improve ideas. This spirit inspires optimism (IDEO, 2015) amongst the design team generated by the atmosphere of "we cannot fail".

Ongoing iterations allow for material interaction between system user and any material aspects of the new system's design. For example, if a piece of technology or a specific location is to be developed as part of the new system, the user has an opportunity to interact with the object. This makes the "practical and political implications of a policy graspable and meaningful" (Kimbell & Bailey, 2017, p. 222). The user has the opportunity to grasp what the new system is going to feel like, thus increasing the relevance of their input. Exploratory prototyping can open up engagement between stakeholders, public servants and government departments, surrounding the structural influences on the DSD. These anticipatory discussions and continual refinement can lead to the creation of new configurations or organizational routines required for implementation. DT requires government to encounter ambiguity in system change, and prototyping has the ability to slowly build up public service risk tolerance and generating buy-in through iterative cycles (Kimbell & Bailey, 2017, p. 220-221). DT can be used to overcome the risk aversion to innovation that exists within the public service.

A final skill the designer brings to the DT process is the aptitude of generating many suggestions and ideas. Research shows designers typically do not generate just one idea but increasing amounts of ideas because they understand the value and significance of cultivating a multitude of possible solutions that can lead to many design iterations, either on their own or from their co-designers (Design Council, 2013). The DSD literature does encourage idea generation or testing multiple prototypes in the design process. Involving a designer whose strategy is focused on iterative design ensures user feedback will likely be incorporated directly into at least one or more designs.

DSD is at a moment where it must reckon with the tension between ‘innovation’ and ‘control’, as well as ‘user voice’ and ‘organizational need’. The implication of utilizing iterative design in the creation of DSD for the public service offers an opportunity to reorient the complaint system towards user voice by placing it central to the design methodology, likely putting user experience at the same level of importance as organizational needs.

4.2.2 THE ROLE OF THE DESIGNER

The position of the designer within the design process is noticeably different between DT and DSD. An examination of the designer’s positionality in the DT process can lend itself to an illuminating understanding of how DSD prioritizes ‘designer expertise’ above ‘user voice’, showcasing the power imbalance that occurs between the two. DT provides a number of designer characteristics, including designer empathy, non-expert approach, and convergent-divergent thinking, which could strengthen DSD to become more rooted in the philosophy of complaint systems as mechanisms of ‘disruptive innovation’ (Gill, 2018) and oriented towards the needs of the user. The next section will apply an understanding of the designer in a human-centered design process as critiqued by Lucy Kimbell (2011a, 2011b, 2012, 2015) to the understanding of the role of the designer in a DSD context.

In the DSD framework literature, authors Constantino & Merchant (1996), Smith & Martinez (2009) and Gill et al. (2016), do not challenge the legitimacy of the authority provided to the designer in the design process. The authors instruct the importance of stakeholder engagement and involvement, but never propose the idea that these stakeholders are given the influence to shape or drive the design process. In a human-centered approach to design the ‘human’, or user, is placed at the centre of the design journey, de-centering the designer and the power that can come with the

position. As much of the DSD literature focuses on construction of quasi-judicial systems, often the designer brings a legal training that supports their authority for final decision-making power in the design of a system (Bingham 2008, 2011; Rogers, et al., 2019). However, with a human-centered methodology, the designer is not positioned as an ‘expert’ or given ‘final authority’ in the same sense DSD designers are as described in DSD frameworks (Gill et al., 2016; Amsler, 2017). Lucy Kimbell (2015), prominent scholar and practitioner of DT, does not mention ‘content knowledge’ as one of the added values of the designer. In the field of DT, designers are not seen as experts on a particular topic, but as experts at facilitating process. Placing designers focused on process, and not the substantive issues at the center of the design process, addresses the imbalance of power that is vested when the designer is perceived as the expert and given final authority.

There are other designer qualities in a human-centered design process that challenge the description of the designer in the DSD literature. Kimbell in *Restarting Britain 2* (Design Council, 2013) states the DT designer’s ability to focus on the human scale of the problem, including the experiences and capacities of the individual on the micro-scale, is a significant asset to program and service delivery in the public sector. A designer empathizes with the human details to understand who the design is for in the context and what are the individual’s interactions with these objects (Design Council, 2013). Another difference is what Kimbell (Design Council, 2013) describes the aptitude and emphasis a designer places upon analytic and synthetic thinking or taking information from many places and distilling it into a simplified reflection as principle to the design process. The concepts of convergent, divergent thinking, synthetic and analytic thinking processes are not discussed in the DSD literature. Kimbell, in *Restarting Britain 2* (Design Council, 2013), points towards the value of the designer’s non-linear, exploratory approach to understanding where they “usefully don’t know” about the context, problem or solution and utilize this lack of insight as an opportunity for continual learning and exploration for the organization (Design Council, 2013). DT requires that the multiple iterations or prototyped solutions are used by the designer to constantly refine their understanding of the problem. This “co-evolution of the problem” between users and designers keeps the problem and solution evolving, where the designer understands, suggests ideas, offers insight to take back to the reevaluating the problem, and then finds better solutions. Many iterations are a byproduct of the ongoing designer’s desire to better understand the context of the problem and refine their understanding of both context and problem.

Marianna Hernandez-Crespo is the only DSD researcher to explicitly challenge the term ‘expert’ in her methods (Symposium Dispute System Design, 2015). Hernandez-Crespo’s application of DSD to community development drove her to generate creative solutions to design with communities. One way Hernandez-Crespo ensured user design into dispute system design was to use a dialogic conversation forum, or a participatory methodology called ‘World Café Dialogues’. A World Café Dialogue is based on specific design principles structured to host large group dialogue (The World Café, 2019). This conversational format flattens hierarchy and authority and equalizes value from each participant. Hernandez-Crespo intentionally does not use the term ‘expert’ and stays away from the word ‘help’, as the author claims it immediately disempowers the users of the system and implicates users with the assumption, they “need to be saved” (Symposium Dispute System Design, 2015). This shows that the process used can empower or disempower participants in the design process. This collaborative approach is unique in the DSD literature, and points towards an opportunity to further infuse DSD with DT principle of designer as facilitator not expert to more usefully incorporate user voice.

This analysis explored the question of whether ‘designing justice’, as Bingham (2008) calls the process of DSD, can be done by a non-expert in what ‘justice is’. The process of human-centered design provides a process designer that is not a content expert but an expert in facilitating a process that is collaborative, participatory and inclusive, does not have final authority, is empathetic, and engages in an exploratory approach to synthesis that goes beyond the description of designer characteristics in the DSD literature. A ‘Design Thinker,’ or designer, who works within an institution has the ability to “see the world from the view of the user, bring an outside pair of eyes to organizational challenges, change the traditional institutional or managerial dynamic, disrupt orthodox thinking and customary positions, and have no vested interest other than what’s best for the citizen” (Design Council, 2013, p. 17). The employ of a designer whose expertise is in design versus expertise in justice per se points towards an ability to infuse more of the design process with user voice.

4.2.3 SUMMARY OF FINDINGS

The following paragraph summarizes the findings of applying an HCD lens and DT methodology to DSD. HCD and DT provide an opportunity to strengthen the DSD process, therefore these

findings are primarily focused on ‘process reforms’ for DSD. There are three findings. The first, notes that DSD does not include multiple iterations or prototypes in the description of the design process, they are concepts absent from the DSD literature. Iterative design can enable an infusion of innovation and ideas where prototypes are continually generated and ongoingly improved. It can imbue a spirit of confidence where user’s ideas are more honed over time, as well iteration builds the risk tolerance of public institutions and generates buy-in. The second finding is the difference between the role of the DSD designer and DT designer. In DSD, designer typically has legal expertise, whereas in DT, the designer has facilitation expertise. The DT designer usefully does not know about the content leading them to continually inquire and learn in an exploratory approach; they are also facilitation experts in collaboration, inclusivity and participatory methods. Finally, the user is not integrated or central to the entire design process in DSD – this is different from DT where there is more meaningful and ongoing user involvement. In DT user input is central, shaping and driving the design process, and users are continuously integrated into the design process. Though DSD mentions the importance of engaging stakeholders in pre and post activities (Gill et al., 2016), DSD is missing the continuous involvement of users in design process.

The next section describes final reflections and recommendations on the future of DSD. This paper has focused on the utility of user voice within the design process as a way to improve user efficiencies and move complaint systems towards mechanisms of ‘disruptive innovation’ and creating systems to better serve their users. Through the analysis and synthesis of the literature and arising themes, four reflections arose as lingering questions to consider for the future of DSD.

5.1 Conclusion

To move DSD from systems of ‘control’ to systems of ‘disruptive innovation’, there are four observations that need to be considered further. Each of the following four themes pose challenges to the ability for a seamless use of DT as a methodology for DSD. They are: the systemic realities of designing justice within larger systems of power; the utility of a professional designation for a DSD designer; the types of complaints that lend themselves to a DT methodology; and the application of the findings to public policy. Each of these themes propose further questions that are necessary to clarify and deepen the connection between HCD and DSD.

5.1 Systemic realities

Bingham (2008) claims that there are no new DSDs only a redesign of existing dispute resolution systems. She is essentially stating that every organization, public body, or judicial system already has some sort of process for dealing with conflict and DSD is simply used to improve upon these existing systems. The author is also pointing towards the assumption of Constantino & Merchant (1996) that dispute systems are nested as smaller sub-systems within a larger organizational system. If these observations are accurate how do dispute systems overcome systematic realities that produce power and silence users. It is not accepted that DT can be counted upon to overcome systemic power relations and a DT methodology may be complicit in perpetuating and replicating existing power structures (Kimbell & Bailey, 2017). The following section builds on the Literature Review and DSD Critical Analysis, exploring the critique of DSD and DT regarding systemic issues of power, context and culture.

Kimbell & Bailey (2017) discuss the use of prototyping in the UK public service pointing out that all solutions are bound within the ideological and political narratives they are designed within (p. 223). Von Busch & Palmas (2016) specify that DT can reinforce existing power structures, and Boltanski and Chiapello (2005) explain that the dynamic and inclusive nature of DT has the potential to absorb contemporary systemic realities offering a new spirit of policy making that remains unable to provide new innovative realities (Kimbell & Bailey, 2017). Kimbell & Bailey (2017) argue that it is unclear how small-scale prototyping intersects with larger institutional, formal, democratic structures and processes. What is used to empower and provide for users in a

specific program or local policy through the use of DT, is not yet understood to simply ripple out into the ‘mass’ policy scale (p. 222). The authors wonder if participatory methods on small-scale projects could be too incapable of addressing dominant systematic power dynamics on a broader scale. As von Busch & Palmas (2016) point out, the method of prototyping could be used as a method of simply masking the reproduction of political agency, dominant neo-liberal status, and reinforcing existing power structures and elites. In other words, paradoxically, DT methods focused and intended to innovate, could be reinforcing the institutional power dynamics that have contributed to their development in the first place.

Work has been done to address systemic power imbalances and introduce the concepts of culture and context in the DSD literature and design frameworks (Hernandez-Crespo, 2011; Amsler, 2017; Amsler, Smith & Martinez, forthcoming). The integration of ‘Context and Culture’ in Smith & Martinez’s Analytic Framework suggests the desire to recognize systemic issues that can influence DSD. Kimbell & Bailey (2017) and Bingham (2008) state DSD and DT are both governed by sets of rules stemming from the institutions and bodies within which they are working. Both of these theorists suggest there are social and political influences on the practice of designing. They state these influences are inseparable from the actions or parties involved in the design and despite the collaborative nature of the process, the design remains fated to replicate the existing power structures and systems they currently exist within. Amsler (2017) and Amsler, Smith & Martinez (forthcoming) point towards new ways to address culture, context and power as factors that need to be taken seriously in the design.

To better explain this tension between designing systems within existing systemic power structures, a case study called Human-Centered Civil Justice Design will be described. Quintanilla (2017) developed the concept of human-centered civil justice design to build innovative civil justice solutions. In practise, human-centered civil justice design looks like this: 1. Designers should evaluate the experiences of stakeholders through online questionnaires; 2. Before any amendment is made, iterations, pilots, and randomized control trials need to be employed; 3. After enactment, stakeholder experiences should be closely monitored. This design theory does include user experiences for quality assurance purposes, yet it is not enabling users to question the existing systems, simply designing new systems only improving existing channels in a rights-based justice system. The author accepts IDEO’s methods as able to account power differences or make room

for culture of the system's users; however, what if these existing rules, policies, procedures, or practices are systematically and structurally unjust? Quintanilla (2017) does not acknowledge alternative strategies, just improving upon existing power structures, and therefore this DSD isn't an application of "disruptive innovation" as per Gill (2018), but merely a "system of control". This example is significant because it attempted to combine DSD and HCD in an explicit method, yet it still left room for curiosity about the priority of human voice in the design process. It leaves the reader with the question: *Does privileging of user voice to make it possible to overcome existing systematic power structures?*

Brennan et al. (2017) discuss the concept of the 'vulnerable consumer', questioning if consumer-to-business dispute resolution systems can meet the needs of all users, particularly those who are viewed as 'vulnerable'. The authors define consumer vulnerability as the, "interaction of personal predicaments, individual characteristics and external conditions, within a consumer context, that negatively affects that person's consumption/citizen experience or experience of the complaint handling processes or systems to which they are exposed" (p. 640). This article acknowledges the differing levels of power complainants that require tailored, individualized processes that enable access to information, advice and support (p. 644). They also state an inclusive approach to design benefits all consumers, not only those who are viewed as vulnerable (p. 644). Brennan et al. explicitly acknowledge that the unique needs of vulnerable consumers do not necessarily destabilize or overwrite overarching systemic realities, but it does enable ways to better serve these intersectional populations impacted by the power systems DSD exists within.

The next section explores the idea of creating a professional designation for DSD designers. As discussed, the use of DSD is diverse and varied. Developing systematic requirements of designer practice is one concept discussed within the DSD literature to provide a routine and balanced approach.

5.2 Professionalization

Common throughout the DSD literature the topic of professionalism and professionalization of DSD is discussed (Menkel-Meadow, 2009; Constatino, 2009). Concern remains about the readiness and implication a professional designation would have on the emerging field. Menkel-Meadow (2009) views the variety of DSD frameworks and the variety of contexts in which DSD

operates, as a reality that complicates the creation of an overarching code of ethics applying to all practitioners (p. 202). Menkel-Meadow poses the important questions: *By whose ethics would we be evaluating DSD? Are they contextual? Legal or other? Is it possible to evaluate international mechanisms without a strong and enforceable international legal order?* Menkel-Meadow (2009) states “any effort to suggest ethical guidelines, by us in an academic-practitioner community in the United States, for other culture, nations and groups, is presumptuous and premature” (p. 221).

Creating a code of ethics or professional designation could provide more consistency to the ad-hoc and unsystematic practice and design of DSD (Bondy & LaSeuer, 2012). However, it brings with it a set of questions described above regarding the concept of designer and institutional power. The question remains: *Would creating a professional designation further increase the power of the designer as an ‘expert’, and move the field of DSD away from the possibility of placing user voice instead of design expertise at the centre of the design process?*

5.3 Types of Complaints

All DSD framework authors (Gill et al., 2016; Hernandez-Crespo, 2008; Smith & Martinez, 2009; Bingham, 2008) point towards the importance of knowing what kinds of disputes the system is looking to settle. The frameworks prompt consideration of context, stakeholders, jurisdictional authority, etc., for DSD in the area of employee relations, or transitional democracies, public sector complaints and allegations processes, or other areas. Rogers et al. (2019) provide case studies to explain the value of involving stakeholders and using collaborative processes; however, the authors do not consider how the involvement of different stakeholder groups might influence system goals and outcomes. Giving users determination over process will likely lead to their determination of the system’s outcomes and definition of what ‘justice’ entails. The question then arises: *Who are the users, and what are their goals? Are they consumers? Are they citizens? Are they employees? Are they victims of crime? Are they perpetrators of crime?*

All of these personas provide a different set of entitlements, a different access to resources, a different context within which to locate the conflict resolution process, different user values, and different theoretical literature. When considering the use of human-centered methods for building DSD, further questioning about its application to which field of complaint processes in the public sector needs to occur. Bingham (2008) extensively describes the many different styles of justice

that designers can consider when engaging in DSD (substantive justice, procedural justice, justice as fairness, micro-justice, interpersonal justice... p.28-32). The type of justice a system user is seeking will become more heavily weighted and integral to the design process. The unique needs and behaviors of the user will shape the desired justice outcomes of the system. For example, complainants experiencing workplace harassment in a para-military organization are going to have a different expectation of justice outcomes than complainants in a condominium building desiring the make a noise complaint about a neighbouring property. Co-designing justice provides a meaningful, human-centered way to shift the system's desired justice outcomes towards user needs; however, this shift could impact the system's final design and warrants curiosity around: *Is HCD appropriate for all types of DSD?*

5.4 Application to Public Policy

Recognizing the lingering questions about the use of HCD for DSD suggests there are both possibilities and barriers to the implementation of this work in the public policy context. As noted in the findings, the connection between HCD and DSD is not straightforward. The use of human-centered principles generates an opportunity to place user needs and representation in the midst and throughout the design process. This can provide the added benefits described previously in the findings of this paper. However, designing with humans is complex. Each individual participating in the process brings with them their own set of experiences and contexts into the design process. In theory, this intersectionality enables a richness to the design. However, in practice this could create barriers and complicate the actual inclusion of users in the design journey. The systemic realities of power, culture, equity, accessibility, and previous experiences point towards the importance of recognizing and facilitating user diversity. In short, 'users' are not a homogenous group. The question emerges, *How can the designer ensure the diversity of human experience is meaningfully incorporated into the design process?* As the combination of DSD and HCD is still an emerging concept, the connection between the two requires further research and evaluation into existing case studies.

Summary

Human-centered design thinking provides a dynamic method of innovation to breakthrough complex social challenges facing complaint systems and mechanisms of redress. This paper sought to bring this concept together with the DSD literature to make the following contributions to the development of complaint mechanisms in public organizations. First, it critically reviewed the principles and values of DSD, including how they have evolved to better understanding if HCD could add value to the work of DSD designers; second, DSD models and frameworks were critically analyzed using the research question: *how human-centered is DSD?*; third, HCD and DT methods of iteration and prototyping along with designer characteristics were examined to explore whether they could bolster the effectiveness of DSD for users; and finally, this paper reflected on some of the challenges facing the connection of these two bodies of literature: systemic realities, professionalization of DSD and the types of complaints most suited to human-centered approaches to design. These reflections each came with outstanding questions for further consideration and recommended reflection for practitioners, scholars and students to consider as they engage in the theory and practice of DSD.

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