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Crowdsourced online dispute resolution

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Citation

Dimov, D. V. (2017, June 27). *Crowdsourced online dispute resolution*. Meijers-reeks.
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Author: Dimov, D.W.

Title: Crowdsourced online dispute resolution

Issue Date: 2017-06-27

Crowdsourced Online Dispute Resolution

Crowdsourced Online Dispute Resolution

PROEFSCHRIFT

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof. mr. C.J.J.M. Stolker,
volgens besluit van het College voor Promoties
te verdedigen op dinsdag 27 juni 2017
klokke 16.15 uur

door

Daniel Velizarov Dimov

geboren te Tutrakan, Bulgarije

in 1983

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eLAW - Leiden University Center for Law and Digital Technologies



SIKS Dissertation series no. 2017-17. The research reported in this thesis has been carried out under the auspices of SIKS, the Dutch Research School for Information and Knowledge Systems.

Lay-out: AlphaZet prepress, Waddinxveen
Printwerk: Ipskamp Printing
ISBN 978-94-028-0578-9

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Preface

In the dawn of the Internet era, I succeeded to buy an expensive computer. I started providing it to other people in return for a small fee. Later, at the age of 16, I bought 7 new computers and made an Internet cafe in the garage of my parents. During my work at the Internet cafe, I became familiar with the Internet. In these times, I learned about programming, web design, hacking, Linux, and other computer activities. Then, I registered myself as a law student in the former Technical University of Ruse (now University of Ruse). In Bulgaria, the Internet and law are two distant things. I really wanted to connect them, but in the University of Ruse there were neither experts in IT law, nor experts in a related discipline. I did not achieve the union of my interests and went to the Netherlands where I studied European law at the Radboud University Nijmegen.

In the Netherlands, I was pleased to learn about the Center for Law in the Internet Society at the Leiden University. After a meeting with prof. dr. Jaap van den Herik, I found the interesting topic of “Crowdsourced Online Dispute Resolution (CODR)”. I was particularly attracted to this topic by the fact that it requires research not only in field of Internet law, but also in the field of philosophy. For instance, during the research, I felt myself close to Plato’s idea for collective organisms and to Jung’s idea for collective consciousness.

I firmly believe in the future of CODR. I also believe that justice should be free, fast, and available to everyone. Please do not understand me wrongly; I know that expertise cannot be provided always for free. However, even if CODR can resolve fairly only some kinds of disputes (1) for lower cost than the costs, which need to be paid for traditional dispute resolution, and (2) faster than the traditional dispute resolution, it would be a great success.

Daniel Dimov
Wervik, West Flanders, Belgium
February 2017

Acknowledgements

I would like to thank prof. dr. Jaap van den Herik who tirelessly guided me through the entire research contained in this thesis. Also, I would like to express my gratitude to prof. dr. Arno R. Lodder and dr. Laurens Mommers who supervised significant parts of this research for their support, constructive feedback, and a goal-oriented approach. Dr. Bibi van den Berg and prof. dr. Simone van der Hof played an important part in the preparation of this thesis. Many thanks for their valuable lessons. Furthermore, I acknowledge with gratitude the support of my fiancée Rasa, my parents Pauna and Velizar, and my brother Ivan. This thesis would not have been possible without them. Last but not least, I thank all my friends and colleagues who contributed to this work, including, but not limited to, Roel van Rijswijck and Metodi Dimitrov.

Table of Contents

| | |
|----------------------------------------------------------------------|------|
| PREFACE | V |
| ACKNOWLEDGEMENTS | VII |
| LIST OF FIGURES | XII |
| LIST OF TABLES | XIII |
| LIST OF CASES | XIV |
| LIST OF DEFINITIONS | XV |
| LIST OF CURRENT CODR PROVIDERS | XVI |
| LIST OF ABBREVIATIONS | XVII |
| 1 INTRODUCTION | 1 |
| 1.1 Three disadvantages of traditional dispute resolution mechanisms | 4 |
| 1.2 eBay's Community Review Forum | 5 |
| 1.3 Problem statement | 7 |
| 1.4 Three research questions | 8 |
| 1.5 Research goal and research methodology | 9 |
| 1.6 Structure of the thesis | 11 |
| 2 LITERATURE REVIEW | 13 |
| 2.1 Literature review on crowdsourcing | 13 |
| 2.1.1 Crowdsourcing in general | 13 |
| 2.1.2 Crowdsourcing in the field of law | 29 |
| 2.2 Literature review on Online Dispute Resolution (ODR) | 30 |
| 2.2.1 Definitions of ODR | 30 |
| 2.2.2 Typologies | 35 |
| 2.2.3 Benefits of ODR | 39 |
| 2.2.4 Drawbacks of ODR | 40 |
| 2.3 Literature review on CODR | 41 |
| 2.4 Chapter summary | 43 |
| 3 ANALYSING EXISTING CODR PROCEDURES | 45 |
| 3.1 Online opinion polls | 45 |
| 3.2 Online mock jury systems | 53 |
| 3.3 Arbitration tribunals rendering self-enforceable decisions | 63 |
| 3.4 Chapter summary | 70 |

| | | |
|-------|------------------------------------------------------------------------------------------------------|-----|
| 4 | A FRAMEWORK FOR CODR | 71 |
| 4.1 | The four building blocks of the Malone framework | 71 |
| 4.2 | The Crowd | 74 |
| 4.2.1 | Type of entity | 75 |
| 4.2.2 | Diversity | 76 |
| 4.2.3 | Governance of the crowd | 76 |
| 4.2.4 | Temporality of the crowd | 78 |
| 4.3 | Incentives | 78 |
| 4.4 | Two broad categories of disputes to be resolved through CODR | 82 |
| 4.4.1 | Online Disputes | 82 |
| 4.4.2 | Offline Disputes | 90 |
| 4.5 | The CODR procedures | 91 |
| 4.5.1 | Parties | 91 |
| 4.5.2 | Stages of CODR | 94 |
| 4.5.3 | Characteristics of CODR procedures | 99 |
| 4.6 | Chapter summary | 105 |
| 5 | OUR INTERPRETATION OF PROCEDURAL FAIRNESS | 107 |
| 5.1 | Objective procedural fairness | 108 |
| 5.1.1 | Expertise | 109 |
| 5.1.2 | Independence | 109 |
| 5.1.3 | Impartiality | 111 |
| 5.1.4 | Transparency | 111 |
| 5.1.5 | Fair hearing | 113 |
| 5.1.6 | Counterpoise | 114 |
| 5.1.7 | Ensuring a reasonable length of procedure | 115 |
| 5.1.8 | Providing reasons | 115 |
| 5.1.9 | Voluntary participation | 116 |
| 5.2 | Subjective procedural fairness | 117 |
| 5.2.1 | Process control | 118 |
| 5.2.2 | Decision control | 119 |
| 5.2.3 | Consistency | 120 |
| 5.2.4 | Accuracy | 121 |
| 5.2.5 | Correctability | 122 |
| 5.2.6 | Ethicality | 122 |
| 5.3 | Our interpretation of procedural fairness | 123 |
| 5.4 | Chapter summary | 125 |
| 6 | PROCEDURAL FAIRNESS OF CODR PROCEDURES | 127 |
| 6.1 | Selection of three CODR procedures | 127 |
| 6.1.1 | Selection of a CODR procedure representing online opinion polls | 128 |
| 6.1.2 | Selection of a CODR procedure representing online mock jury systems | 130 |
| 6.1.3 | Selection of CODR procedures representing arbitration tribunals rendering self-enforceable decisions | 130 |

| | | |
|--------|-------------------------------------------------------|-----|
| 6.2 | Analysis of compliance with our interpretation | 132 |
| 6.2.1 | The compliance of iCourthouse with our interpretation | 132 |
| 6.2.2 | The compliance of Jurytest with our interpretation | 137 |
| 6.2.3 | The compliance of the ECRF with our interpretation | 140 |
| 6.2.4 | Section summary | 146 |
| 6.3 | Chapter summary | 147 |
| 7 | A MODEL OF A FAIR CODR PROCEDURE | 149 |
| 7.1 | THE COMPOSITION OF THE MODEL | 149 |
| 7.1.1 | Expertise | 149 |
| 7.1.2 | Independence | 150 |
| 7.1.3 | Impartiality | 151 |
| 7.1.4 | Transparency | 152 |
| 7.1.5 | Fair hearing | 153 |
| 7.1.6 | Counterpoise | 155 |
| 7.1.7 | Ensuring a reasonable length of procedure | 156 |
| 7.1.8 | Providing reasons | 156 |
| 7.1.9 | Voluntary participation | 157 |
| 7.1.10 | Process control | 157 |
| 7.1.11 | Decision control | 158 |
| 7.1.12 | Consistency | 158 |
| 7.1.13 | Accuracy | 162 |
| 7.1.14 | Correctability | 163 |
| 7.1.15 | Ethicality | 164 |
| 7.2 | Chapter summary | 164 |
| 8 | CONCLUSIONS AND FUTURE RESEARCH | 167 |
| 8.1 | Answers to the research questions | 167 |
| 8.2 | Answer to the problem statement | 168 |
| 8.3 | Contributions | 169 |
| 8.4 | Future research | 170 |
| | REFERENCES | 175 |
| | SUMMARY | 191 |
| | SAMENVATTING | 193 |
| | SUMMARY IN BULGARIAN | 195 |
| | PUBLICATIONS | 197 |
| | CURRICULUM VITAE | 199 |
| | SIKS DISSERTATION SERIES (2011-2017) | 201 |

List of Figures

| | | |
|------------|--------------------------------------------------------------------------------------------------------------------------|-----|
| Figure 1. | A screenshot of a task published on Amazon's Mechanical Turk | 16 |
| Figure 2. | A task published on InnoCentive | 18 |
| Figure 3. | Case Number 2005-11320 published on iCourthouse.com | 47 |
| Figure 4. | A screenshot of SideTaker | 49 |
| Figure 5. | A screenshot of a comment of an Internet visitor in relation to case 47048 posted on PeopleClaim | 50 |
| Figure 6. | A screenshot of eJury | 54 |
| Figure 7. | A notice of open call published by eJury | 56 |
| Figure 8. | A notice of open call published by Jurytest | 58 |
| Figure 9. | An excerpt of a verdict published by OnlineVerdict.com | 59 |
| Figure 10. | A screenshot of TrialJuries | 61 |
| Figure 11. | A screenshot of the eBay's Community Court (an early version of the ECRF) | 66 |
| Figure 12. | A screenshot of Marktplaats Gebruikersjury | 68 |
| Figure 13. | A screenshot of the crowdsourcing application ESP | 80 |
| Figure 14. | A screenshot of feedback posted by customers of a company selling books on Amazon.co.uk | 84 |
| Figure 15. | A list of freelancers in Elance.com, including the rating received by those freelancers | 84 |
| Figure 16. | A virtual arbitration room of the arbitration center created by the Portuguese government in Second life | 89 |
| Figure 17. | Parties in CODR procedures | 92 |
| Figure 18. | A complaint form used by PeopleClaim | 95 |
| Figure 19. | A notice sent by iCourthouse to the defendant | 133 |
| Figure 20. | A screenshot of casetext.com | 154 |
| Figure 21. | A screenshot of the case search interface of iCourthouse | 159 |
| Figure 22. | A screenshot of the case search interface of the Arbitration center for Internet disputes of the Czech Arbitration Court | 160 |
| Figure 23. | A screenshot of an interface window of the platform "CrowdSource" | 160 |

List of Tables

| | | |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Table 1. | Four interrelations between three taxonomies | 19 |
| Table 2. | The characteristics of the three types of past and present CODR procedures | 104 |
| Table 3. | Assessment of CODR procedures that function as online opinion polls in accordance with two criteria, namely, availability of documents explaining the examined procedures and the use of adjudication for resolving disputes | 128 |
| Table 4. | Assessment of CODR procedures that function as online mock jury systems in accordance with one criterion, namely, the use of adjudication for resolving disputes | 129 |
| Table 5. | Assessment of CODR procedures that function as arbitration tribunals rendering self-enforceable decisions in accordance with two criteria, namely, availability of documents explaining the examined procedures and the use of adjudication for resolving disputes | 131 |
| Table 6. | Findings of the assessment of iCourthouse, JuryTest, and the ECRF with our interpretation of procedural fairness [– means “does not comply”, V means compliance] | 146 |

List of Cases

- I. European court of Human Rights
 - Bulut v. Austria* (1996) 24 EHRR 84
 - Foucher v. France* (1997) 25 EHRR 234
 - H v. Belgium* (1987) 10 EHRR 339
 - Hentrich v. France* (1994) 18 EHRR 440
 - Klimentyev v. Russia* (2009) 49 EHRR 14
 - Le Compte, Van Leuven And De Meyere v. Belgium* (1981), 4 EHRR 1
 - Suominen v. Finland* (2003), ECHR 330

- II. United Kingdom
 - R v. Bow Street Stipendiary Magistrate ex parte Cherry* [1990] 91 Cr App R 283

- III. United States
 - Cheney v. U.S. Dist. Court for Dist. Of Columbia*, 542 U.S. 367 (2004)

- IV. iCourthouse
 - Case No. 2006-11582
 - Case No. 2006-11578
 - Case No. 2007-11593
 - Case No. 2007-11596
 - Case No. 2008-11618
 - Case No. 2012-11652

- V. PeopleClaim
 - Case No. 47048

List of Definitions

| | |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CODR | CODR is a term that encompasses some forms of ADR and court proceedings using the Internet and crowdsourcing as parts of the dispute resolution process. |
| Collective decision | “A collective decision occurs when members of a collectivity make individual decisions that they would not make if the other members of the collectivity were not making related decisions. A collective decision thus entails coordination of intentions” (Tideman, 2006, p.5). |
| Crowdsourcing | Crowdsourcing is “the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call.” |
| Due process | Due process refers to fundamental procedural legal safeguards of which every citizen has an absolute right when a court or a state intends to take a decision which can affect any right of that citizen. |
| Objective procedural fairness | Objective procedural fairness is a compliance of a procedure with a standard whereby the procedure is assessed by an individual or an organisation as just or unjust. |
| ODR | ODR is a broad term that encompasses forms of ADR and court proceedings, which use ICT as a part of the dispute resolution process. |
| Subjective procedural fairness | Subjective procedural fairness is an individual’s subjective perception of the fairness of a procedure. |
| The crowd | The crowd participating in CODR is a group of people who participate in the dispute resolution process through an open call. |

List of current CODR providers

1. eJury, <http://www.ejury.com>
2. iCourthouse, <http://www.icourthouse.com>
3. Jurytest, <http://www.jurytest.net>
4. League of Legends Tribunal, <http://na.leagueoflegends.com/tribunal>
5. Marktplaats GebruikersJury, <https://gebruikersjury-marktplaats.moldria.com>
6. OnlineVerdict, <http://www.onlineverdict.com>
7. PeopleClaim, <http://www.peopleclaim.com>
8. Sidetaker, <http://www.sidetaker.com>
9. Taobao User Dispute Resolution Center, <http://pan.taobao.com>
10. TrialJuries, <http://www.trialjuries.com>
11. VirtualJury, <http://www.virtualjury.com>

The abovementioned websites were last visited on 3rd of January 2017.

List of Abbreviations

| | |
|-------|----------------------------------------------------------------------------|
| ADR | Alternative Dispute Resolution |
| AJDR | Alberta's Judicial Dispute Resolution |
| AMT | Amazon's Mechanical Turk |
| BATNA | Best Alternative to Negotiated Agreement |
| CAPP | A Facebook group called "Quickly, Canadians against Proroguing Parliament" |
| CODR | Crowdsourced Online Dispute Resolution |
| DSR | Detailed Seller Rating |
| EC | European Community |
| ECHR | The European Convention on Human Rights |
| ECRF | eBay's Community Review Forum |
| ECtHR | The European Court of Human Rights |
| ESP | Extra Sensory Perception |
| FAQ | Frequently Asked Questions |
| ICANN | Internet Corporation for Assigned Names and Numbers |
| ICT | Information and communications technology (ICT) |
| ODR | Online Dispute Resolution |
| PS | Problem statement |
| RQ | Research question |
| UDRP | Uniform Domain-Name Dispute-Resolution Policy |
| USD | United States dollar |
| USPTO | United States Patent and Trademark Office |

In the past two decades, two new concepts appeared in the scientific domain in relation to decision making and information systems. These concepts are crowdsourcing and online dispute resolution (ODR). The latter concept is directly related to the discipline of law. The former concept is intriguing and may be applied to the framework of legal decisions. In this thesis, we investigate to what extent crowdsourcing is a fruitful concept to be incorporated in the set of legal decision procedures.

The concept of crowdsourcing was coined by Howe (2006). Basically, crowdsourcing is an act of outsourcing a job, previously done by workers, to a large group of people in the form of an open call.¹ Nowadays, crowdsourcing is used by commercial and public organisations. A widely known example of an organisation using crowdsourcing is Wikipedia Foundation Inc. It is an American non-profit charitable organisation maintaining an online encyclopedia called Wikipedia. Wikipedia allows any Internet user to edit the Wikipedia articles.² The users of Wikipedia are not paid for their contributions. Nevertheless, by 3rd of January 2017, the English version of Wikipedia contained 5,322,750 articles.³ Several studies indicate that the quality of the articles in Wikipedia is similar to the quality of paid encyclopedias (Clauson, Polen, Kamel Boulos, Dzenowagis, 2008; Leithner, Maurer-Ertl, Glehr, Friesenbichler, Leithner, Windhager, 2010; Wood and Struthers, 2010; Staub and Hodel, 2015).

ODR refers to Alternative Dispute Resolution (ADR) and court proceedings which use the Internet as a part of the dispute resolution process (cf. Kaufmann-Kohler and Schultz, 2004, p. 7). The term ODR was coined in the period 1995-1998 (cf. Morek, 2006).⁴ Today, ODR is used by many

1 There are several definitions of crowdsourcing. The most important ones can be found in Section 2.1.

2 The Wikipedia editing policy can be read at <http://en.wikipedia.org/wiki/Help:Editing> (last visited Jan. 3, 2017).

3 See https://en.wikipedia.org/wiki/Wikipedia:Size_of_Wikipedia (last visited Jan. 3, 2017).

4 ODR is a result of virtualisation of dispute resolution, i.e., a process that occurs as a result of the use of information and communication technology and leads to decreasing dependence on specific locations in time and space for acts of dispute resolution processes (cf. Mommers, 2005, p. 213). Virtualisation of dispute resolution may, for example, allow disputants to meet online instead of in person or allow disputants to present evidence online instead of in a court room (cf. Mommers, 2005, p. 213).

commercial and public organisations.⁵ A widely known example of an ODR procedure is ICANN's Uniform Domain-Name Dispute-Resolution Policy (UDRP).⁶ UDRP is an online administrative procedure that allows disputants to resolve disputes concerning domain names. The decisions rendered through UDRP are enforced by the Registrar. The Registrar is an entity through which the respondent has registered a domain name that is the subject of a complaint.⁷

In 1999, Perception Corporation, an American company, started an ODR platform that uses crowdsourcing. The platform is called iCourthouse.⁸ In iCourthouse, anyone can start a dispute resolution process or become a juror. iCourthouse allows the plaintiffs to post any kind of dispute. iCourthouse jurors select the cases they would like to decide from a list of cases. Every juror is entitled to post his⁹ "verdict" and thus help the parties to reach an agreement.¹⁰ The decisions rendered by iCourthouse are neither legally binding nor self-enforceable.

The dispute resolution procedure offered by iCourthouse uses both the Internet and crowdsourcing. It is also known as Crowdsourced Online Dispute Resolution (CODR). The term CODR was used for the first time in a meeting in 2009 hosted by the Berkman Center for Internet & Society's Law Lab.¹¹

CODR encompasses some forms of Alternative Dispute Resolution (ADR) using the Internet and crowdsourcing as parts of the dispute resolution process.¹² In the context of this definition, ADR refers to a method for resolving disputes, which is different from the normal trial process (cf. Thomson and Sherr 2012, p. 29). ADR mechanisms can be divided into two groups: (i) adjudicative mechanisms and (ii) non-adjudicative mechanisms (Kaufmann-Kohler and Schultz, 2004, p. 56). In comparison with adjudicative mechanisms, non-adjudicative mechanisms may not achieve a result because the disputants using them may fail to agree on a settlement

5 To demonstrate the popularity of ODR, it is sufficient to note that the European Commission has created an ODR platform which is a single point of entry for consumers and traders seeking out-of-court disputes covered by the EU Regulation No 524/2013 on consumer ODR. Pursuant to Article 14 of the same Regulation, all information society service providers based in the European Union should provide their customers with a link to the ODR platform. For more information on the history of the EU Regulation No 524/2013 on consumer ODR, see Lodder (2016).

6 ICANN stands for the Internet Corporation for Assigned Names and Numbers.

7 See ICANN's Rules for the Uniform Domain-Name Dispute-Resolution Policy available at <http://www.icann.org/en/help/dndr/udrp/rules> (last visited Jan. 3, 2017).

8 See www.icourthouse.com (last visited Jan. 3, 2017).

9 For the sake of brevity, we use "he" and "his" whenever "he or she" and "his or her" are meant.

10 For more information on iCourthouse's Rule of procedure, see http://www.i-courthouse.com/main.taf?area1_id=front&area2_id=rulesofproc (last visited Jan. 3, 2017).

11 The report on the meeting can be found at http://lawlab.org/cODR_Workshop_Report_7-8-09.pdf (last visited Jan. 3, 2017).

12 For more information on the way this definition has been constructed, see Section 2.3.

(Kaufmann-Kohler and Schultz, 2004, p. 56). Some CODR procedures use adjudicative mechanisms, whereas other CODR procedures rely on non-adjudicative mechanisms.¹³

Because CODR allows a quick dispute resolution at (almost) no cost for the disputants and is capable of resolving a large number of disputes, it has the potential to become an important dispute resolution mechanism for online disputes, such as disputes concerning feedback, online transactions, and relations in virtual worlds (cf. Rule and Nagarajan, 2010). The reason for this potential is that resolving online disputes through non-CODR procedures can be difficult (see Rule and Nagarajan, 2010).¹⁴ In practice, the difficulties are caused by (1) the high price and (2) slow speed of traditional dispute resolution mechanisms as well as (3) their incapability to resolve a large number of online disputes (cf. Rule and Nagarajan, 2010, p. 5). Here, we explicitly remark that the traditional dispute resolution mechanisms are incapable to resolve a large number of online disputes because the number of such disputes may amount to millions per year (See Section 1.1).

Our research focuses on the development of fair and just means involving crowdsourcing to help resolving a small and a large number of (online) disputes (cf. Van den Herik and Van Eijk, 2013).

The content of the first chapter is as follows. The three disadvantages of the traditional dispute resolution mentioned above are elaborated upon in Section 1.1. Section 1.2 describes eBay's solution to the disadvantages of the traditional dispute resolution mechanisms. The solution consists of an ODR procedure using crowdsourcing which is called eBay's Community Review Forum (the ECRF). In Section 1.3, our problem statement is formulated. Section 1.4 contains three research questions. Section 1.5 describes our research goal and research methodology. Section 1.6 describes the structure of the thesis.

13 For example, Taobao User Dispute Resolution Center (<http://pan.taobao.com>, last visited Jan. 3, 2017) and Markplaats Gebruikersjury (<https://gebruikersjury-marktplaats.modria.com>, last visited Jan. 3, 2017) resolve disputes through adjudicatory mechanisms, i.e., the members of the crowd make decisions which are compulsorily enforced on the parties. In contrast, People Claim (<http://www.peopleclaim.com>, last visited Jan. 3, 2017) uses a non-adjudicative mechanism for resolving disputes, i.e., the members of the crowd in PeopleClaim do not render a decision, but merely provide recommendations to the disputants on how to resolve their disputes. For an overview of Taobao User Dispute Resolution Center, Markplaats Gebruikersjury, and PeopleClaim, see Chapter 3.

14 Hereinafter, we refer to litigation, ADR, and ODR as traditional dispute resolution mechanisms.

1.1 THREE DISADVANTAGES OF TRADITIONAL DISPUTE RESOLUTION MECHANISMS

The three disadvantages of traditional dispute resolution mechanisms mentioned above, viz. (1) a high price, (2) a slow speed, and (3) the incapability to resolve a large number of online disputes are explained and substantiated by examples.¹⁵

With regard to the high price of traditional dispute resolution mechanisms, Rule and Nagarajan (2010, p. 4) note that, because the average value of online disputes is usually less than USD 100, and quite often less than USD 20, delivering an appropriate dispute resolution process at a price that is acceptable to the disputants and the platform administrators is extremely difficult to achieve.¹⁶ Tang (2015, p. 333) supports Rule and Nagarajan's observations by stating that the average online consumer contract value is USD 60, whereas an exemplary UK provider of ODR services charges between GBP 25 and GBP 850 for a resolution of consumer disputes. According to Tang (2015, p. 333) even the lowest charge of GBP 25 will be disproportionately expensive compared with the average value of the consumer disputes. Therefore, a cheap CODR procedure is recommended.

Pertaining to the slow speed of traditional dispute resolution mechanisms, it should be noted that such mechanisms are usually designed to be deliberate and thorough, so as to enable a quality outcome for each case (Rule and Nagarajan, 2010, p. 5). However, in the online environment

15 We consider the three disadvantages to be the major disadvantages of traditional dispute resolution mechanisms. However, traditional dispute resolution mechanisms may have other disadvantages. For example, providers of traditional dispute resolution mechanisms usually do not provide the disputants with the opportunity to choose third neutral parties speaking less-common languages. This may have a negative impact on the quality of the dispute resolution services as an interpreter may not be able to correctly translate the statements of the disputants and the supporting evidence. To illustrate, as of 31st of December 2016, 52 arbitrators registered at the UDRP section of the Czech Arbitration Court offer arbitration services in English, whereas no arbitrator registered at the Czech Arbitration court offers arbitration services in Bulgarian. See <http://udrp.adr.eu/adr/panelists/> (last visited Jan. 3, 2017).

16 There are exceptions from this general trend. For example, some non-governmental organisations provide free and timely dispute resolution. Below, we discuss two such examples, namely, the Better Business Bureau (BBB) and the Centre for Volunteering. BBB, a nonprofit organization established in 1912, facilitates the resolution of disputes between businesses and their customers. Complaints submitted to the BBB are usually resolved within 30 business days. See <https://www.bbb.org/consumer-complaints/file-a-complaint/get-started> (last visited Jan. 3, 2017).

The Centre for Volunteering provides early mediation to volunteers contributing to the activities of the Centre. See "Voluntas program offers free dispute solutions for Australia's volunteers", an article published by the Australian Catholic University on 9th of May 2016. The article is available at http://www.acu.edu.au/staff/our_university/newsroom/staff_news_item/voluntas_program_offers_free_dispute_solutions_for_australias_volunteers (last visited Jan. 3, 2017). For more information on the Centre, see <https://www.volunteering.com.au/about-us/> (last visited Jan. 3, 2017).

people often would like to have a quick dispute resolution. As Rule and Nagarajan noted, people expect online services, including online dispute resolution services, to be available 24 hours a day, seven days a week (cf. Rule and Nagarajan, 2010, p. 5). Furthermore, disputed online content (e.g., copyrighted materials and negative reviews) can be propagated through the Internet within a matter of hours, thus making regular ODR procedures ineffective (cf. Pearson, Roux-Dufort, Clair, 2007, pp. 88-89). Hence, the challenge for CODR procedures is to resolve disputes faster than the current ODR procedures.

In relation to the incapability of the traditional dispute resolution to resolve a large number of online disputes, it should be pointed out that, when the number of disputes runs into millions, human-powered dispute resolution cannot handle the scale of disputes. If the disputes have predominantly small monetary value, their resolution will be even more difficult because of the limited budgets which disputants usually are willing to spend for the resolution of such disputes (cf. Benyekhlef and Gelinias, 2005, p. 14). To illustrate the high number of online disputes, it is sufficient to note that eBay has to resolve about 60 million online disputes concerning transactions of goods every year (see Rule and Nagarajan, 2010, p. 5). If all 15,000 employees working at eBay were to resolve 10 disputes a day, and if every employee spent every workday just resolving disputes, the employees could satisfactorily complete two-thirds of the volume in one year. Here, too, the challenge is whether CODR is a solution to the large number of online disputes.

The three disadvantages of the traditional dispute resolution with regard to the resolution of online disputes urged eBay to create the ECRF, to which we turn in the next section (See also Rule and Nagarajan, 2010, p. 5).

1.2 EBAY'S COMMUNITY REVIEW FORUM

While the first web platforms providing CODR were launched in the end of the 1990s, CODR became better known with the launch of the eBay's Community Review Forum (ECRF) in 2008. The ECRF was started by eBay Inc. as a reaction to the increased number of online disputes.

A brief introduction to eBay reads as follows. eBay Inc. is a private company based in San Jose, California, USA. It manages eBay.com, an online auction and shopping website in which people and companies buy and sell a wide variety of goods and services. As of the second quarter of 2011, eBay had 100 million active users globally. In 2015, eBay's revenue amounted to USD 8.59 billion.¹⁷

17 See "eBay Inc. Financial Statement Results" provided by Google Finance available at <http://www.google.com/finance?q=NASDAQ%3AEBAY&fstype=ii&ei=H9T4UPiZFMrqkAWb5QE> (last visited Jan. 3, 2017).

Until 2012, the ECRF allowed sellers to appeal non-positive feedback on matters, which they believed to be unfair. The claims were sent to 21 randomly selected members of eBay's Community for a proper judgement. The 21 members acted as a jury. Their selection will be discussed later. The decisions of the jury were enforced by the eBay Customer Service Representative, who, if appropriate, removed the feedback. The CODR procedure offered by the ECRF was capable of resolving a large number of disputes, free of charge, and in a short time. The ECRF was capable to handle so many disputes because there were more than sufficient applications of potential jury members to support the case volume (see Rule and Nagarajan, 2010, p. 6). In relation to the timing of ECRF's procedure, it should be noted that the maximum time of the procedure was 22 days.

However, on January 31, 2012, the ECRF was stopped. According to eBay, the reason for closing the ECRF was the reduced impact of negative feedback on a seller's performance evaluation. Also, according to eBay, the impact was reduced because eBay began evaluating seller performance on the basis of Detailed Seller Ratings (DSRs). The DSRs rate specific aspects of the transaction between a seller and a buyer.¹⁸ According to eBay, DSRs will allow the buyers "to be honest and open about their buying experience so sellers can get a more complete picture of their performance."¹⁹

It should be noted that, following the example of the ECRF, Marktplaats.nl and Taobao.com launched their own CODR procedures in 2010 and 2012, respectively.²⁰ The procedure operated by Marktplaats.nl is called GebruikersJury, whereas the procedure operated by Taobao.com is called Taobao User Dispute Resolution Center (Ericson and Wang, 2014).²¹ While GebruikersJury resolves feedback disputes only, Taobao User Dispute Resolution Center resolves all kinds of e-commerce disputes arising out of the use of Taobao.com (Ericson and Wang, 2014).²²

Taking into account the success of Taobao User Dispute Resolution Center which (1) resolved 238,000 online-shopping disputes in 2013 and (2) attracted more than 575,000 crowd jurors within the period December 2012 – July 2014, it can be argued that CODR has a potential to become a widely used mechanism for resolving online disputes (Erickson and Wang, 2014).²³

18 A section of eBay's Help Page containing information on Detailed Seller Ratings can be accessed at <http://pages.ebay.com/help/feedback/detailed-seller-ratings.html> (last visited Jan. 3, 2017).

19 See the section eBay's Help Page containing information on Detailed Seller Ratings.

20 A Google search indicates that the webpage of Marktplaats Gebruikersjury (<https://gebruikersjury-marktplaats.modria.com>, last visited Jan. 3, 2017) appeared in Google Search Engine on 25th of July 2010. For information on the year of creation of Taobao User Dispute Resolution Center, see Ericson and Wang (2014).

21 See the terms and conditions of GebruikersJury available at <https://gebruikersjury-marktplaats.modria.com/mp/jsp/TermsAndConditions.jsp> (last visited Jan. 3, 2017).

22 See the terms and conditions of GebruikersJury available at <https://gebruikersjury-marktplaats.modria.com/mp/jsp/TermsAndConditions.jsp> (last visited Jan. 3, 2017).

23 Taobao is a Chinese online shopping website. See <http://www2.alizila.com/how-taobao-crowdsourcing-justice-online-shopping-disputes> (last visited Jan. 3, 2017).

CODR, being a type of ODR, may be the technology envisaged by Susskind (2013, p. 102) in the following paragraph:

“I predict that ODR will prove to be a disruptive technology that fundamentally challenges the work of traditional litigators (and of judges). In the long run, I expect it to become the dominant way to resolve all but the most complex and high-value disputes.”

I believe that the potential of CODR can be realised if we manage to arrive at a fair dispute resolution via CODR, which is acknowledged by the whole online community (and even by the offline community, i.e., the people who do not use Internet for their communication, contacts, and living).

1.3 PROBLEM STATEMENT

There are two types of procedural fairness, namely, objective procedural fairness and subjective procedural fairness. Objective procedural fairness relates to the compliance of a procedure with a standard whereby the procedure is assessed by an individual or an organisation as just or unjust, whereas subjective procedural fairness refers to an individual's subjective perception of fairness of a procedure (cf. Mansbridge, 1990, p. 327).

Procedural fairness is one of the most essential concepts of dispute resolution. The concepts of procedural fairness in dispute resolution, including ODR, have been discussed by a number of scholars (Lind and Tyler, 1988; Röhl and Machura, 1997, pp. 3-4; Kaufmann-Kohler and Schultz, 2004, pp. 118-120; Coteanu, 2005, pp. 157-160; Schiavetta, 2008; Hörnle, 2009; Cortés, 2010, pp. 79-82). In our study, we build on these publications.

Although procedural fairness in ODR procedures has been already extensively discussed, there is a lack of literature on procedural fairness in CODR. Hence, it is not clear whether CODR procedures comply with the requirements of procedural fairness. It is also not clear what procedural safeguards should be implemented in CODR procedures in order to prevent instances of procedural unfairness. Since the procedural fairness affects (a) the attractiveness of dispute resolution procedures and (b) the acceptance of decisions of dispute resolution procedures, the unclarity whether or to what extent CODR procedures comply with the requirements of procedural fairness may hamper the future development of CODR (cf. Grey, 1977, p. 182; Adler, Hensler, and Nelson 1983; McEwen and Maiman, 1984; Lind and Tyler, 1988, p. 93; Kaplow and Shawell 2009, p. 264).

Concerning the relationship between procedural fairness and the attractiveness of dispute resolution procedures, it should be noted that the attractiveness of fair procedures comes from the fact that the procedural fairness is manifested in the conventional morality (cf. Grey, 1977, p. 182; Kaplow and Shawell 2009, p. 264). Typical examples of the manifestation of procedural fairness in the conventional morality include the unwillingness of the

disputants to ask for costly punishments, such as cutting off future relationships, unless real misbehaviour has occurred, and the unwillingness of disputants to allow actual wrongdoers to avoid punishment (Kaplow and Shawell 2009, p. 264).

Three studies indicate that subjective procedural fairness is linked to the acceptance of the decisions.²⁴ First, McEwen and Maiman (1984) examined the compliance with adjudicated and mediated settlements of disputes in small claims courts. They found that disputants are more likely to comply with settlements that they perceive to be fair. Second, Adler, Hensler, and Nelson (1983) conducted a study in the context of nonbinding arbitration administered by the courts. They found that the satisfaction of the disputants was linked to the perceived fairness of the procedure used to resolve the dispute. We will assess the extent to which CODR procedures meet the requirements of procedural fairness. This leads us to the following Problem Statement (PS).

PS: To what extent is it possible for CODR procedures to resolve disputes in a way that complies with the requirements of procedural fairness?

For answering the problem statement, we will investigate whether CODR procedures can be designed in such a way as to ensure fair dispute resolution. If this is possible, CODR procedures will have the potential to become attractive, trusted, and widely accepted dispute resolution procedures.

1.4 THREE RESEARCH QUESTIONS

To guide our research and to answer the problem statement, we formulate three research questions (RQs). For a proper assessment of a new CODR procedure, we will compare its working with the working of other dispute resolution mechanisms. This leads us to the first research question, which reads as follows.

RQ1: In what way does CODR differ from other dispute resolution schemes?

The answer to this research question will allow us to acquire a clear understanding of the essence of CODR. The understanding is a necessary part of answering the problem statement. In particular, there is a need for establishing whether or not the only difference between CODR and other dispute resolution mechanisms, including ODR, lies in replacing judges, arbitrators, or mediators by a group of people, which is called “crowd”. If this is not so, then there are other differences that need to be investigated. As a conse-

24 It should be noted that subjective procedural fairness may not be the most important factor affecting the attractiveness of a procedure. For example, the users of the ODR procedure provided by PayPal give more importance to the procedural speed than the fairness of the procedure (Lodder and Zelewikow, 2012, p. 21).

quence, they have to be analysed in the context of RQ1. Moreover, it is then necessary to obtain an understanding of crowdsourcing and its relation to dispute resolution processes in general.

Our PS requires us to acquire understanding about two concepts, namely, (1) CODR and (2) procedural fairness in the context of dispute resolution. While RQ1 will provide us with understanding about CODR, we will need to formulate a second research question in order to get understanding about procedural fairness. Our question will be focused on procedural fairness in the field of adjudicative dispute resolution because all, but one CODR procedures, resolve disputes through adjudication.²⁵ Consequently, the second research question reads as follows.

RQ2: What is procedural fairness in the context of adjudicative dispute resolution?

The answer to RQ2 will be provided by using standards of fairness and supplementing them in accordance with the findings of empirical studies examining individuals' perceptions of procedural fairness. Thus, our interpretation of procedural fairness will reflect not only standards of fairness, but also disputants' perceptions of procedural fairness. It should be pointed out that definitions of fairness created for the purposes of this research are necessary for answering the problem statement.

RQ3: Are the past and present CODR procedures fair?

In order to answer RQ3, we will examine whether representative past and present CODR procedures comply with the requirements of procedural fairness. More specifically, we will focus our research on three procedures, viz. iCourthouse, JuryTest, and the ECRF.²⁶ These three procedures were chosen because they represent different stages of the history of CODR as well as different approaches.²⁷ We prefer to examine three, and not more, CODR procedures due to readability, space limitations, and focus of the thesis.

1.5 RESEARCH GOAL AND RESEARCH METHODOLOGY

The research goal of this study is to propose a model of a CODR procedure that would guarantee a fair dispute resolution. The model can be used for the creation of new procedurally fair CODR procedures and may become a basis for an academic debate on fairness of CODR procedures. To reach the research goal, we will be guided by the PS and the three research questions. For answering the PS and the three questions accurately, we follow the methodology described below.

25 For more information on the dispute resolution mechanisms used by past and present CODR procedures, see Section 6.1.

26 iCourthouse and the ECRF have already been briefly described above. For more information on JuryTest, please visit Section 3.2.B.

27 For an overview of the history of CODR, see Section 3.

For RQ1 (In what way does CODR differ from other dispute resolution schemes?), we will conduct a thorough literature review on CODR and other dispute resolution schemes. Moreover, we will examine the past and present CODR procedures and identify the precise characteristics of CODR. For a proper comparison, we will analyse the differences and analogies between CODR and other dispute resolution schemes.

It should be pointed out that the literature review of ADR, ODR, and CODR includes (1) a review of academic literature, (2) documents concerning ADR and ODR published by national public authorities and international organisations, and (3) documents published by ADR, ODR, and CODR providers. The documents published by national authorities and international organisations include mainly non-binding legal instruments, such as Communications, Recommendations, and Reports. The documents published by CODR providers include Rules of Procedures and Frequently Asked Questions (FAQs).

For RQ2 (What is procedural fairness in the context of adjudicative dispute resolution?), we will initially examine the EU Directive on ADR.²⁸ The Directive is a normative standard of procedural fairness of ADR procedures. We have chosen to base our interpretation of objective procedural fairness on the EU Directive on ADR for two reasons. First, the Directive establishes a standard of fairness applying to ADR procedures. This makes it an appropriate standard for examining CODR procedures, all of which are ADR procedures.²⁹ Second, we aim to make our model of a fair CODR procedure compliant with a widely used standard of procedural fairness. This will increase the practical applicability of the model. The Directive is a widely used standard of procedural fairness of ADR procedures. It applies in the entire European Union, which has a population of about 500 million people.³⁰ Next, we will examine empirical studies related to subjective procedural fairness and formulate an interpretation of subjective procedural fairness. Afterwards, we will supplement our interpretation of objective procedural fairness with our interpretation of subjective procedural fairness. Thus, we will formulate our interpretation of procedural fairness.

For answering the PS (To what extent is it possible for CODR procedures to resolve disputes in a way that is consistent with the requirements of procedural fairness), we analyse whether and to what extent the current CODR procedures comply with our interpretation of procedural fairness.

In this regard, it should be noted that we analyse three CODR procedures, namely iCourthouse, JuryTest, and the ECRF. They were chosen

28 Directive 2013/11/EU of the European Parliament and of the Council of 21 May 2013 on alternative dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC.

29 An overview of past and present CODR procedures is provided in Chapter 3.

30 See a statistic provided by Eurostat at <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&language=en&pcode=tps00001&tableSelection=1&footnotes=yes&labeling=labels&plugin=1> (last visited Jan. 3, 2017).

because they represent different types of CODR procedures. iCourthouse falls into the group of online opinion polls. JuryTest is an online mock jury system. ECRF is a typical example of an arbitration tribunal rendering self-enforceable decisions (see Chapter 3). The three differences between the three CODR procedures are as follows. Online opinion polls only extract and aggregate information (cf. Jurca and Faltings, 2008, p. 119). Online mock jury systems allow lawyers who have actual cases to gain insight into how prospective jurors view those cases. The decisions of the arbitration tribunals rendering self-enforceable decisions are enforced by private organisations.

1.6 STRUCTURE OF THE THESIS

In *Chapter 1*, we provide an introduction to CODR. Then, we formulate our problem statement, three research questions, a research goal, and our research methodology. At the end, the structure of the thesis is described.

In *Chapter 2*, we examine literature on crowdsourcing, ODR, and CODR. The literature review provides us with a degree of understanding that is necessary for answering the research questions.

In *Chapter 3*, we examine the past and present CODR procedures. This will be done by examining various CODR procedures.

In *Chapter 4*, we provide a framework describing the building blocks of CODR and analyse the differences between CODR and other dispute resolution schemes. Thus, we answer RQ1 (In what way does CODR differ from other dispute resolution schemes?).

In *Chapter 5*, we intend to answer RQ2 (What is procedural fairness in the context of adjudicative dispute resolution?) by providing: (1) a suitable interpretation of objective procedural fairness based on the Directive on ADR; and (2) a suitable interpretation of subjective procedural fairness on the basis of empirical studies measuring perceptions of procedural fairness. At the end of the chapter, we establish our interpretation of fairness by supplementing our interpretation of objective procedural fairness with our interpretation of subjective procedural fairness.

Chapter 6 provides an answer to RQ3 (Are the past and present CODR procedures fair?) by investigating whether three of the current CODR platforms comply with our interpretation of procedural fairness. We identify the obstacles that prevent them from being called fair CODR procedures.

In *Chapter 7*, we design and construct a model of a CODR procedure that complies with our interpretation of procedural fairness. Thus, we answer the PS (To what extent is it possible for CODR procedures to resolve disputes in a way that complies with the requirements of procedural fairness) and accomplish our research goal (proposing a model of a CODR procedure that would guarantee a fair dispute resolution).

In *Chapter 8*, we provide the conclusions of the thesis and formulate directions for further research.

This chapter reviews the literature on crowdsourcing, online dispute resolution (ODR), and crowdsourced online dispute resolution (CODR). Crowdsourcing refers to a business model. In Section 2.1, we review the existing literature on crowdsourcing in general and crowdsourcing in the field of law. The concept of ODR refers to a mechanism used for dispute resolution. In Section 2.2, we review the literature of online dispute resolution. Section 2.3 contains a literature review on crowdsourced online dispute resolution CODR. In Section 2.4, we provide concluding remarks.

2.1 LITERATURE REVIEW ON CROWDSOURCING

For the purpose of this research, the articles and books on crowdsourcing are divided into two categories, namely, works discussing crowdsourcing in general (Subsection 2.1.1) and works discussing the use of crowdsourcing in the field of law (Subsection 2.1.2). In both subsections, academic literature related to these two categories is examined.

2.1.1 Crowdsourcing in general

From the works on crowdsourcing in general, we select six relevant topics for a closer inspection. They are: (A) relevant definitions, (B) typologies of crowdsourcing, (C) the relation of crowdsourcing to advanced concepts, (D) crowdsourcing as a business model, (E) the benefits of crowdsourcing, and (F) the drawbacks of crowdsourcing. These topics were identified on the basis of our literature review of crowdsourcing.

A: Relevant definitions

The use of crowdsourcing is an essential characteristic of CODR. That is why a clear understanding of CODR requires a discussion of crowdsourcing in general. For the purpose of this research, we will use the definition of crowdsourcing provided by Howe (2006) (See definition 2.1).

Definition 2.1 (*Crowdsourcing*): *Crowdsourcing is “the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call” (Howe, 2006).*

In order to clarify the definition, we need to understand the term “open call.” As far as we know, this term has not been defined or clarified in the literature on crowdsourcing in general. In our view, two requirements must be met to classify a call as “open.” The first requirement as dedicated to CODR is that everyone from the online community where the call is published should be entitled to participate in CODR, provided that the candidate meets certain conditions.¹ One such a condition can be that only users of a website who have been registered for a certain time can participate in CODR (this is the case at the ECRF). A second condition can be that only the first n members of the crowd (e.g., $n=30$) can participate in CODR (cf. Van den Herik and Dimov, 2011a, p. 245).² We note that theoretically an open call may not require the members of the crowd to meet any conditions.³ The second requirement for classification of a call as “open” is that it should be published or made available in such a way that every member of the online community where the open call is published should be able to find information about it (see Van den Herik and Dimov, 2011a, pp. 245-246).

The reason for using Howe’s (2006) definition for the purposes of this research is twofold. First, this definition is widely accepted and used in other definitions of crowdsourcing (see, e.g., the definitions below by Geerts, 2009, p. 2; Nachira, Dini, and Nicolai, 2009, p. 11).⁴ Second, the definition provides a clear and precise description of crowdsourcing. As can be seen, other definitions of crowdsourcing examined below lack clarity or do not describe all features of crowdsourcing.

We divide the set of other definitions of crowdsourcing into two groups, namely, (A1) definitions based on the definition by Howe and (A2) other definitions of crowdsourcing. Below, we show the definitions of both groups.

-
- 1 The members of the crowd can participate in CODR as jurors, arbitrators, mediators, and facilitators of negotiations.
 - 2 The First File First Serve principle is often used in the field of law. For instance, the principle is used in Article 12 of the Industrial Design Law No.31 of 2000 of Indonesia which states: “The party who first files an application shall be deemed as the holder of the Right of Industrial Design, unless proven otherwise.” The Industrial Design Law No.31 of 2000 of Indonesia is available at https://www.jpo.go.jp/shiryoushou_e/s_sonota_e/fips_e/pdf/indonesia_e/e_ishou.pdf (last visited Jan. 3, 2017).
 - 3 However, crowdsourcing platforms usually have legal documents, which should be accepted by crowdsourcing workers before participating in an open call. For example, users of Wikipedia must accept Wikipedia’s Terms of Use. See https://wikimediafoundation.org/wiki/Terms_of_Use#Our_Terms_of_Use (last visited Jan. 3, 2017). Users of the crowdsourcing platform “Innocentive” (a platform allowing its users to resolve research and innovation problems) must accept the Terms of Use of Innocentive. See <https://www.innocentive.com/ar/contract/view> (last visited Jan. 3, 2017). The users of Amazon Mechanical Turk must accept Amazon Mechanical Turk Participation Agreement. See <https://www.mturk.com/mturk/conditionsfuse> (last visited Jan. 3, 2017).
 - 4 The definitions of crowdsourcing by Geerts (2009, p. 2), Nachira, Dini, and Nicolai (2009, p. 11) can be found in Subsection 2.1.1.A1.

A1: Definitions based on the definition by Howe

Below, we present two different definitions of crowdsourcing which are based on the definition by Howe (2006). They emphasise accomplishing a task and using a new business model, respectively.

- Geerts (2009, p. 2): crowdsourcing is “the online outsourcing of a task to (a group of) private individuals in the form of an open call.” The concept of open call is discussed in Subsection 2.1.1.A.
- Nachira, Dini, and Nicolai (2007, p. 11): crowdsourcing is a “new business model in which a company or institution takes a job traditionally performed by a designated agent (usually an employee) and outsources it to an undefined, generally large group of people in the form of an open call over the Internet.”

These two definitions and the definition by Howe (2006) have three similarities, namely, they all define crowdsourcing as (1) outsourcing of activities, (2) to a number of people, (3) and in the form of an open call. The similarities clearly indicate that the definitions by Geerts (2009, p. 2) and Nachira, Dini, and Nicolai (2007, p. 11) are based on the definition by Howe (2006).

A2: Other definitions of crowdsourcing

Below, we present three definitions of crowdsourcing which are not based on the definition by Howe (2006) and do not share any similar elements with it. For example, in comparison with the definition by Howe (2006), the three definitions do not define crowdsourcing as an act of outsourcing, which takes place in the form of an open call. The first of these three definitions is as follows.

- Souza, Ramos, and Esteves (2011): crowdsourcing is “a set of methods and technologies of reaching external contributions from a large number of individuals through Internet tools.”

This definition does not reflect one of the important features of crowdsourcing, namely, that crowdsourcing is a business model that allows the providers of crowdsourcing applications to utilise the labor of the members of the crowd for the completion of certain tasks that are previously done by employees. A clear indication that the term crowdsourcing should be understood as a business model, and not as a mere set of methods and technologies of reaching contributions, can be found in the article by Howe in which he coined the term crowdsourcing (Howe, 2006(b)). In that article, Howe states it is as follows:

“Hobbyists, part-timers, and dabblers suddenly have a market for their efforts, as smart companies in industries as disparate as pharmaceuticals and television discover ways to tap the latent talent of the crowd. The labor isn’t always free, but it costs a lot less than paying traditional employees. It’s not outsourcing; it’s crowdsourcing.”

The second of the three definitions follows below.

- Gerber, Hui, Kuo (2012, p. 2): crowdsourcing is “a way to harness the creative solutions of a distributed network of individuals.”

The definition states that crowdsourcing is a way to harness creative solutions. However, the solutions provided by the members of the crowd may not be creative at all. For example, Amazon’s Mechanical Turk, a crowdsourcing application where requesters post tasks and workers choose which tasks to do for payment, allows the requesters to post tasks that include simple data entry operations.⁵ Figure 1 is a screenshot of a task published on Amazon’s Mechanical Turk that requires the completion of straightforward data entry operations.⁶

The third of the three definitions reads as follows.

- Kolb (2013, p. 124): crowdsourcing is “taking a large job, which might be too difficult or time consuming for one person, dividing it into smaller actions, and then getting many people to be involved by doing a portion of that larger job.”

The use of the following five adjectives deprives the aforementioned definition from clarity: “large”, “too difficult”, “smaller”, “many”, and “larger”.

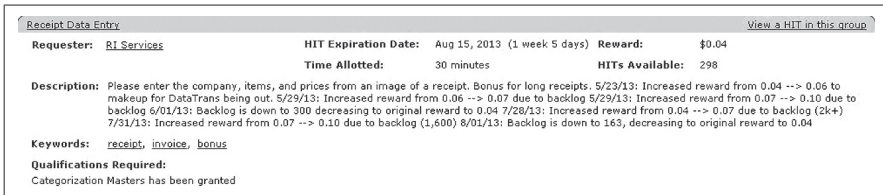


Figure 1. A screenshot of a task published on Amazon’s Mechanical Turk

B: Typologies of crowdsourcing

In our literature review, we found many typologies of crowdsourcing. These typologies are relevant and allow us to understand the great variety and complexity of CODR procedures. Below, we will mention the typologies of crowdsourcing based on (B1) the complexity of the tasks, (B2) the nature of the tasks, and (B3) the platforms of crowdsourcing.

B1: Complexity of the task

Schenk and Guittard (2011) distinguish between crowdsourcing of simple tasks and crowdsourcing of complex tasks. These two types of crowdsourcing are examined below.

5 See Amazon’s Mechanical Turk. Available on [https:// www.mturk.com](https://www.mturk.com) (last visited Jan. 3, 2017).

6 For more information on global online job marketplaces, see Section 4.4.1B.

B1a: Crowdsourcing of simple tasks

The crowdsourcing of simple tasks is suitable for the completion of such tasks on a large scale requiring substantial resources. Examples are tasks requiring the identification of a large number of photos. Two examples of crowdsourcing applications which use crowdsourcing of simple tasks are (1) NASA's Clickworkers and (2) Galaxy Zoo.⁷ We briefly describe both of them below.

Operating between November 2000 and September 2001, NASA's Clickworkers, a project run by the US National Aeronautics and Space Administration (NASA), relied on Internet volunteers to identify craters on photos of Mars to support the NASA research. The volunteers did not need any previous expertise. The project attracted more than 80,000 people who marked nearly 2 million craters for measurement and classified the relative age of another 300,000 craters. The quality of the work by the crowdsourced workers was the same as the quality achieved by expert crater raters (cf. Szpir, 2002).

Galaxy Zoo is an interactive project that allows the users to classify millions of galaxies found in the Sloan Digital Sky Survey. It was an astronomical survey using a dedicated 2.5-m wide-angle optical telescope at Apache Point Observatory in New Mexico, United States. The survey resulted in multi-color images covering more than a quarter of the sky and created 3-dimensional maps containing more than 930,000 galaxies and more than 120,000 quasars.⁸

In the future, crowdsourcing of small tasks may be successfully applied in the field of CODR. For example, crowdsourcing of small tasks can be used for electronic discovery of information related to disputes. Electronic discovery refers to the discovery of electronically stored information, including e-mail, web pages, word processing files, computer databases, and other information stored on a computer device (cf. Jaishankar and Ronel, 2013, p. 86).

The use of crowdsourcing in the field of electronic discovery is a relatively new method of electronic discovery, but it is not unprecedented. On 18th of June 2009, the lower house of the Parliament of the United Kingdom published 700,000 receipts indicating the expenses of the members of the parliament. The UK's newspaper The Guardian published the receipts in a special crowdsourcing system allowing any Internet user to comment on individual expenses and highlight ones of interest (cf. Rogers, 2009). Within 90 minutes of its launch, 1700 users had audited the MPs' expenses using The Guardian's new crowdsourcing tool (see Townend, 2009). 170,000 documents were reviewed by the members of the crowd in the first 80 hours

7 See the official website of NASA's Clickworkers at <http://nasaclickworkers.com> (last visited Jan. 3, 2017) and the official website of Galaxy Zoo available at <http://www.galaxy-zoo.org> (last visited Jan. 3, 2017).

8 See the official website of The Sloan Digital Sky Survey at <http://www.sdss.org> (last visited Jan. 3, 2017).

(Vehkoo, 2013, p. 6). Although no major misconduct was found, the experiment allowed The Guardian to build its reader community (Vehkoo, 2013, p. 6).

B1b: Crowdsourcing of complex tasks

Crowdsourcing can be used for the completion of simple tasks as well as for complicated tasks that require a high level of expertise (cf. Schenk and Guittard; 2011). InnoCentive is a typical example of a crowdsourcing application utilising crowdsourcing of complex tasks.⁹ InnoCentive connects organisations with innovators. When an organisation chooses a solution to the problem, the winning innovator receives a premium. The premium is usually higher than USD 10,000 (see Schenk and Guittard 2011). The tasks are within various scientific domains, including, but not limited to, chemistry, computer science, engineering, mathematics, and physical science. Figure 2 displays a task published on InnoCentive.

The example of InnoCentive shows that crowdsourcing has the potential to be used in the field of dispute resolution not only for simple tasks that do not require previous expertise, but also for tasks that require a high level of expertise, such as providing legal and scientific advice to disputants. For instance, crowdsourcing of tasks that require a high level of expertise may be used to ensure the impartiality of the third neutral party in proceedings related to professional malpractice or unauthorized practice of law. If the third neutral parties in such proceedings are professionals, they may be biased towards their colleagues. A CODR procedure in which the crowd is composed of an equal number of professionals and clients may decrease the risk of such a bias.



Figure 2. A task published on InnoCentive

B2: The nature of the tasks

Below, we compare three characterisations that are based on the nature of the tasks. We combine them in Table 1 and distinguish four interrelations.

9 See <http://www.innocentive.com> (last visited Jan. 3, 2017).

Depending on the nature of the tasks that can be accomplished through crowdsourcing, Howe (2009) distinguishes four types of crowdsourcing, namely, *collective intelligence*, *crowd creation*, *crowd voting*, and *crowdfunding*. The first type is used for problem solving, the second for content creation, the third for rating content, and the fourth for gathering funds.

Grefen (2010) distinguishes three types of crowdsourcing, namely, (1) *crowdcasting*, (2) *crowdproduction*, and (3) *crowdfunding*. Crowdcasting is a business model in which the crowd is used to generate ideas by answering specific questions. Here, crowdstorming is a variation of crowdcasting; it allows the crowd to generate new ideas without very clear questions as a basis. Crowdproduction is a business model in which the crowd is used to produce a product, which can be of a digital nature. Crowdfunding is aimed at having a crowd fund a venture.

Schenk and Guittard (2011) distinguish two types of crowdsourcing, namely: (1) *integrative crowdsourcing* and (2) *selective crowdsourcing*. The integrative crowdsourcing is used for accomplishing large tasks by integrating complementary contributions from the crowd. A typical example of integrative crowdsourcing is Wikipedia. By integrating millions of small contributions, including text and photos, Wikipedia offers an encyclopedia containing a wide array of detailed articles. The selective crowdsourcing is used for accomplishing tasks by harnessing the problem solving skills of the members of the crowd. As Schenk and Guittard (2011) noted, selective crowdsourcing implies a winner-takes-all mechanism where only the finder of the “winning” solution receives an award. A typical example of selective crowdsourcing is InnoCentive.

| Interrelation between the types of crowdsourcing | Taxonomy provided by Howe (2009) | Taxonomy provided by Grefen (2010) | Taxonomy provided by Schenk and Guittard (2011) |
|--------------------------------------------------|----------------------------------|------------------------------------|-------------------------------------------------|
| (1) | Collective intelligence | Crowdcasting | Selective crowdsourcing |
| (2) | Crowd creation | Crowdproduction | Integrative crowdsourcing |
| (3) | Crowd voting | Crowdcasting | Selective crowdsourcing |
| (4) | Crowdfunding | Crowdfunding | N/A |

Table 1. Four interrelations between three taxonomies

Below, we discuss the four interrelationships between the three taxonomies on the basis of their concepts.

- (1) Collective intelligence, crowdcasting, and selective crowdsourcing are interrelated because all of them refer to crowdsourcing processes in which the tasks assigned to the crowd may include problem solving.
- (2) Crowd creation, crowdproduction, and integrative crowdsourcing are interrelated because all of them refer to crowdsourcing processes in which the tasks assigned to the crowd may include production of content.
- (3) Crowd voting, crowdcasting, and selective crowdsourcing are interrelated because all of them refer to crowdsourcing processes in which the tasks assigned to the crowd may include rating content.

- (4) The concepts of crowdfunding used by Howe (2010) and Greven (2010) are the same because both of them refer to crowdsourcing in which the crowd submits funds to a crowdsourcing provider.

In summary, Table 1 indicates that the different typologies of crowdsourcing have common elements, which can be used for understanding crowdsourcing. Finally, we remind that the taxonomy provided by Howe (2009) again serves as an umbrella for the other taxonomies.

B3: The platforms of crowdsourcing

The platform of crowdsourcing can be considered as the basis from where the venue originates. Stanoevska-Slabeva (2011) distinguishes the following five crowdsourcing platforms: (1) intermediary platforms, (2) user-initiated crowdsourcing platforms, (3) company initiated platforms, (4) idea market places and platforms, and (5) public crowdsourcing-initiative platforms. Below, we describe them briefly.

The intermediary platforms are created by intermediaries, which provide a venue where crowdsourcing workers and seekers of crowdsourcing services can meet and work together. InnoCentive is an example of an intermediary platform.

In user-initiated crowdsourcing platforms, the term “user-initiated crowdsourcing” refers to a crowdsourcing process where the crowdsourcing is initiated by an individual user. Thus, a blog of an individual user allowing the visitors to rate the articles published by that user is an example of a crowdsourcing platform using user-initiated crowdsourcing.

Company initiated platforms are created by companies which outsource certain tasks to crowdsourced workers. Company initiated platforms may, for instance, allow a company to collect and examine the opinions of the consumers in relation to the products or services offered by that company. The global online job marketplaces using crowdsourcing, which allow companies to find and work with freelancers, are typical examples of company-initiated platforms.¹⁰

The term “idea market places” refers to crowdsourcing platforms collecting ideas from the users and selling those ideas to the public. A typical example of an idea marketplace is Threadless.¹¹ Threadless allows anyone to submit images for t-shirts, bags, and other products. The images are put to a public vote. The top-scoring images are printed on products and sold worldwide through the website of Threadless and their retail store in Chicago, USA. Since its establishment in 2000 up to 2010, Threadless sold more than four million T-shirts (cf. Nickel and Kalmikoff, 2010).

10 The global online job marketplaces include, without limitation, <http://www.freelancer.com> (last visited Jan. 3, 2017) and <http://www.upwork.com> (last visited Jan. 3, 2017).

11 See <http://threadless.com> (last visited Jan. 3, 2017).

Public crowdsourcing-initiative platforms contain initiatives initiated by public authorities. For example, in 2010, the Irish government launched a crowdsourcing platform which aimed to collect ideas from the population regarding the question how to achieve higher economic growth. The top two ideas were awarded with EUR 100,00 (cf. Foremski, 2010).

The typology of crowdsourcing platforms indicates that a great variety of crowdsourcing platforms have been developed up to the present time. In Chapter 3, we will focus on the different crowdsourcing platforms.

C: The relation of crowdsourcing to the advanced concepts

The concept of crowdsourcing may overlap or sometimes even be used interchangeably with other concepts, such as (C1) collaborative systems, (C2) user-generated content, (C3) collective intelligence, and (C4) Web 2.0. Below, we will explain the four concepts. We give their meaning and show the relation to the term crowdsourcing.

C1: Collaborative systems

In the field of the information technology, collaborative systems are software applications that are used by individuals to help them coordinate their work with others, whether designed for that purpose or not (cf. Khosrowpour, 2002, p. 86). The term “collaborative system” is a broad concept that includes crowdsourcing applications allowing the members of the crowd to coordinate their work. Wikipedia is an example of a crowdsourcing application allowing the members of the crowd to coordinate their work in order to build an encyclopedia of use to a larger community.

C2: User-generated content

Casoto, Dattolo, Omero, Pudota, and Tasso (2010, p. 16) define the user-generated content as “any kind of published content, result of a non-professional activity with creative effort.” In most cases, the content published on the Internet by the users of crowdsourcing applications is user-generated content. The reason is that such content is often a result of non-professional activities with creative efforts. Examples of user-generated content created by the users of crowdsourcing applications include the articles of Wikipedia and the content published by the users of online social networks.

C3: Collective intelligence

Below, we provide a definition (C3a) of collective intelligence by Sulis (1997) as well as an explanation of collective intelligence by Lévy (C3b).

C3a: Sulis (1997) defines collective intelligence as “consisting of a large number of quasi-independent, stochastic agents, interacting locally both among themselves as well as with an active environment, in the absence of hierarchical organisation, and yet which is capable of adaptive behaviour.”

In this context, it should be noted that the behaviour of large groups of people who gather and act individually, but also share some common community goals is not *per se* a collective intelligence. To be collectively intel-

lignant, the people should be aware that they act as a collective organism and intentionally act as members of such an organism (cf. Lykourentzou, Vergados, Kapetanious, and Loumos, 2011, p. 219). Collective intelligent behaviour is, for example, the behaviour of the contributors in Wikipedia who create encyclopedic articles by collaborating and building on the contributions of each other.

C3b: Lévy (1999, p. 13) explains, that “the collective intelligence is continuously enhanced, coordinated in real time, and resulting in the effective mobilization of skills.” In this regard, Lévy points out that intelligence that is “frequently ridiculed, ignored, unused, and humiliated is obviously not enhanced (Lévy, 1999, p. 13).” As an example of ignored intelligence, Lévy refers to the social exclusion through unemployment. By not being able to involve all of its members in the economic life, the society does not act in a collectively intelligent way. According to Lévy, the result is a “terrifying waste of experience, skill, and human wealth.”

A good example is Wikipedia. The collective intelligence of the editors of Wikipedia is continuously enhanced because the editors have the opportunity to contribute to various topics and by various ways. We mention the editor’s contributions (1) by writing articles, (2) by merely proofreading the articles of the other wikipedians, and (3) by checking whether the articles comply with the strict requirements of Wikipedia concerning the sources of information used in the articles.

C4: Web 2.0

Web 2.0 can be defined as “all Internet services and tools which are based on a database which Internet users can modify, whether in terms of content (adding, deleting or editing information or relating information with existing information), its presentation, or both” (Ribes, 2007). The mostly used Web 2.0 applications include online social networks, blogs, and wikis. Online social networks are services that encourage their members to exchange their ideas, interest, music, and videos (cf. Varmaat, Sebok, Freund, Frydenberg, Campbell, 2016, p. 23). A blog is a web page that contains a series of chronological entries by its author (cf. Laudo and Traver, 2012, p. 159). A Wiki is a web application that allows users to add and edit content on a webpage.

Web 2.0 provides the technological foundations upon which the crowdsourcing applications operate, enabling the members of the crowd to complete tasks that were previously assigned to employees (cf. Vukovic and Bartolini, 2010, p. 425). For instance, Wikipedia (a crowdsourcing application) is based on a Wiki (a Web 2.0 application).

D: Crowdsourcing as a business model

Crowdsourcing is a new business model allowing providers of crowdsourcing applications to obtain information from large groups of people that was previously provided by employees. This business model proved to be so viable that several crowdsourcing applications became serious competitors

of applications based on the traditional business model. Below, we provide two different examples.

A first example is the competition between Wikipedia and Microsoft Encarta. Microsoft Encarta was a digital multimedia encyclopedia published by Microsoft Corporation from 1993 to 2009. However, Wikipedia became a very strong competitor of Microsoft Encarta and forced Microsoft to shut down Encarta (Cohen, 2009). Thus, Wikipedia challenged the validity of traditional business models based on individual and explicit relationships (cf. RAND Europe, 2010, p. 11; Lee Eden, 2015, p. 179).¹²

A second example is the open-source operating system Linux. Linux is the result of the programming efforts of thousands of people around the world contributing to a free code base. The contributors submit their contributions to persons, also known as maintainers, who are responsible for the development of the particular area of Linux (cf. Timberg, 2015). While many maintainers are employed by various Linux vendors, others still work in their free time without remuneration (cf. Mauerer, 2010). The maintainers collect the contributions and send them to Linus Torvalds, the top-level maintainer. Linus Torvalds uses the contributions to create a new version of Linux (see Sally, 2009, p. 252; Timberg, 2015). The business value to organisations that have adopted Linux is huge. For example, by adopting the Linux platform, IBM alone has estimated savings in the hundreds of millions of dollars (cf. Ekins, Williams, Pikas, 2011, p. 89).

The business model introduced by crowdsourcing can be either decentralised or centralised. In the decentralised business model, the relationship between the organisation that crowdsources tasks and the crowdsourcing workers is not hierarchical. The organisation crowdsourcing tasks does not exercise direct control on the crowdsourcing workers.

Wikipedia is an example of a decentralised crowdsourcing application. The control on the articles published on Wikipedia is exercised only by other users of Wikipedia. There are some users of Wikipedia who even volunteer as Wikipedia cops (cf. Brafman and Beckstrom, 2007, p. 76). Some authors (Brafman and Beckstrom, 2007, p. 76; Godet, 2015, p. 189) compare an organisation having a decentralised business model to a starfish. A starfish does not have a head, but it can still live and grow.

In the centralised business model, the relationship between the organisation crowdsourcing tasks and the crowdsourcing workers is hierarchical. A typical example is InnoCentive where the organisation crowdsourcing the tasks chooses one of the solutions proposed by the innovators. Thus, the organisation crowdsourcing the tasks has complete control over which crowdsourcing worker will receive a financial remuneration. Brafman and Beckstrom (2007) and Godet (2015, p. 189) compare an organisation with a

12 It should be noted that Wikipedia became world's largest online encyclopedia. The success of Wikipedia led to the shutting down of Microsoft Encarta, and also to the end of the printed Encyclopedia Britannica. In 2012, after 244 years of existence, the printed version of Encyclopedia Britannica was discontinued (Zhao, Zhang, Lei, Qiu, 2015).

centralised business model to a spider. The head of the spider controls its body. Linux is also an example of a crowdsourcing application having a centralised business model. The reason is that Linus Torvalds has complete control on whether or not to accept the contributions of the crowdsourced workers.

In order to implement a successful decentralised or centralised business model, organisations need to meet three criteria, namely, (1) the subject of the task being crowdsourced must consist of elements which can be changed without compromising the integrity of the whole subject, (2) a community of interest must be engaged, and (3) the organisation willing to introduce crowdsourcing must have a structural capability to engage the crowd and process the contributions of the crowd (Rowe, Poblet, Thomson, 2015).

E: Benefits of crowdsourcing

The benefits of all kinds of crowdsourcing are threefold, viz. (1) the diversity, (2) the high speed of decisions, and (3) the low cost of the crowdsourcing solutions (cf. Whitla, 2009, p. 25; Ericson, 2011; Schenk and Guittard, 2011). Below, we examine these three benefits (E1, E2, and E3).

E1: Diversity

The first benefit concerns the diversity of the crowd. It should be noted that, if everyone is entitled to participate in the open call, the crowd will most likely be composed from Internet users differing in age, gender, nationality, location, etc. A diverse crowd will propose different solutions to a problem, thereby increasing the likelihood that a solution will be found (cf. Page, 2008).

However, some studies indicate that Internet users cannot be regarded as a diverse crowd. The reason is that a typical Internet user is likely to be educated and under the age of 65. According to the Pew Research Center Internet Project Survey conducted between 9 and 12 of January 2014, 87% of American adults use the Internet. However, only 57% of the American adults aged 65 and older use the Internet.¹³ A statistic covering the year 2016 provided by Eurostat reveals that, while 97% of the individuals in the EU in the age group 16-24 use the Internet, only 51% of the individuals in the EU in the age group 65-74 use the Internet.¹⁴ Another statistic provided by Eurostat also revealed that, in 2013, only 48% of the individuals in the EU having a low education use the Internet, compared to 93% of the individuals in the EU having a high education.¹⁵

13 For more information on the Pew Research Center Internet Project Survey conducted between 9 and 12 January 2014, please visit <http://www.pewinternet.org/data-trend/internet-use/latest-stats/> (last visited Jan. 3, 2017).

14 See the statistics "Individuals – internet use" provided by Eurostat (last checked on 20th of December 2016).

15 'Internet use statistics - individuals', Eurostat. Available at http://ec.europa.eu/eurostat/statistics-explained/index.php/Archive:Internet_use_statistics_-_individuals (last visited Jan. 3, 2017).

While we confirm the findings that a typical Internet user is likely to be educated and under the age of 65, the fact is that Internet users cannot be treated as representing any single country or profession. So, while the members of the crowd may have some common characteristics, their diversity may also be significant.¹⁶

E2: High speed of decisions

Because crowdsourcing utilises the resources of a large group of people, crowdsourcing solutions are typically characterised by a high speed. For example, the US National Aeronautics and Space Administration (NASA) found that it is ten times faster to use online crowds to measure craters on images of Mars than to use regular workers (Sheehan, 2010, p. 105). A second example illustrating the high speed of crowdsourcing applications is the ECRF. The ECRF was capable to resolve disputes within 22 days as counted from the submission of the complaint (cf. Van den Herik and Dimov, 2011b, p. 268). In comparison, UDRP disputes are resolved through ODR in as little as 60 days of filing (cf. Partridge, 2012).

E3: Low cost of the crowdsourcing solutions

Crowdsourcing offers low cost solutions (cf. Sheehan, 2010, p. 105; Murray-Rust, Scekcic, Lin, 2015, p. 41). The reason is straightforward: the contributions by the crowd are unpaid or, in some cases, the company/organisation that crowdsourced the task has to pay only for the best solution(s). All in all, the organisation's cost of crowdsourcing is likely to be lower than that of internal development or cooperation with a specific firm or individual (cf. Afuah, 2009, p. 108; Sfetcu, 2015). The ECRF is an example of a crowdsourcing application capable to complete complex tasks without providing remuneration to the members of the crowd (cf. Van den Herik and Dimov, 2011a).

F: Drawbacks of crowdsourcing

There are seven drawbacks associated with using crowdsourcing, namely, (F1) the vast amount of information that may be of little relevance, (F2) legal issues regarding ownership of ideas/works submitted, (F3) the very low piece-rates that are paid to crowdsourced workers, (F4) lack of transparency of crowdsourcing processes, (F5) lack of trust in crowdsourcing processes, (F6) risk of too few participants, (F7) information overload, and (F8) lack of representativeness. We discuss them briefly below.

16 This conclusion is based on studies examining the demographics of Internet users in general, which may differ from the demographics of users of crowdsourcing applications. We note that the conclusion must be supported by research on the demographics of users of crowdsourcing applications.

F1: Information of little relevance

The first drawback is that crowdsourcing applications may collect a vast amount of information of little relevance, i.e., poor quality and entries irrelevant for the company and the project. Such irrelevant information may make crowdsourcing applications an unreliable source of information (cf. Qvist, 2011, p. 76). The irrelevant information can be filtered with filtering mechanisms (see Neskovic, Pavicevic, Dadic, 2012, p. 1155; Greffen, 2010). One quite promising way to filter information obtained through crowdsourcing is to allow the members of the crowd to rate that information. RANKER is an example of a website using this kind of filtering.¹⁷ After a user has posted a question in RANKER, the other users can add answers to this question and/or vote for the already existing answers. The answers that received the higher number of votes are displayed on the top of the list of answers.

F2: Legal issues

The second drawback concerns the fact that crowdsourced workers do not sign written contracts or nondisclosure agreements. Therefore, it is difficult to protect the intellectual property of the organisation collecting the ideas (cf. Afuah, 2014, p. 68). In the context of CODR, this is not an issue (and has not been an issue so far) because the CODR platforms generally do not claim intellectual property rights on the content published by the parties.¹⁸

F3: Low piece-rates

The third drawback concerns the low wages of the crowdsourced workers. Profit-based companies that pay low wages to crowdsourced workers may be accused of unethically exploiting crowdsourced workers. A company offering crowdsourced jobs often may gain a big profit from its crowdsourcing activities because of the low expenses for salaries, whereas the workers do not have any social rights, such as the right to leave, the right to regulated labor, and the right to a minimum salary (cf. Whitla, 2009, p. 26; Murray-Rust, Scekcic, Lin, 2015, p. 41). In this regard, Whitla proposes that firms engaged in crowdsourcing activities need to be required to justify the social responsibility of their actions (Whitla, 2009, p. 26).

As a further argument, we would like to mention that providing a low remuneration to the members of the crowd participating as mediators or arbitrators in a CODR procedure may encourage them to resolve the dispute without paying much attention to the facts of the case. Such a behaviour

17 See RANKER, www.ranker.com (last visited Jan. 3, 2017).

18 For example, the user agreement provided by iCourthouse, a CODR provider, states that "iCourthouse does not own Content you submit, unless we tell you otherwise before you submit it." See http://www.i-courthouse.com/main.taf?area1_id=front&area2_id=useragreement (last visited Jan. 3, 2017). The terms of use of another CODR provider, PeopleClaim, states that "You understand that all Content on PeopleClaim.com is the sole responsibility of the person from whom the Content originated." See <http://www.peopleclaim.com/Terms.aspx> (last visited Jan. 3, 2017).

of the members of the crowd will be a form of retaliation for the unethical treatment with regard to the remuneration or mere indifference.

It is worth mentioning that, up until the present moment, only CODR functioning as online mock juries provide the members of the crowd with remuneration for their services.¹⁹ The other CODR procedures provide non-monetary incentives to the members of the crowd.

F4: Lack of transparency of crowdsourcing processes

The fourth drawback relates to the transparency of crowdsourcing applications. Those applications often do not use transparent processes allowing the members of the crowd to know how their contributors are used by the initiator of the crowdsourcing process. For example, the organisation crowdsourcing the task in InnoCentive may decide to use ideas proposed by the innovators without providing them with a financial remuneration. This is because the organisation has a complete discretion in deciding whether some of the proposed ideas deserve financial remuneration. Sloane (2011, p. 135) states that the lack of transparency is one of the common mistakes that companies make when undertaking a collaborative process. Sloane points out that the lack of transparency will decrease the participation rates because “people react to the lack of communicated progress on collected input, by having less motivation to take part in future innovation efforts” (Sloane, 2011, p. 135).

F5: Lack of trust in crowdsourcing processes

The fifth drawback concerns trust in crowdsourcing processes. In this regard, Goodman and Dingli (2013) and Afuah (2009) argue that the lack of trust is caused by the lack of contracts or non-disclosure agreements between the crowdsourcing workers and the initiators of the crowdsourcing applications. The lack of such documents makes the crowdsourcing processes non-transparent and deprives the parties in crowdsourcing processes from legal protection (see Gibbons, 2009, pp. 167-168). Because the information exchange includes a power-balancing and trust-building function, transparency is a precondition and a mediator for trust (DiPiazza and Eccles, 2002).

Consequently, the use of legal documents establishing the rights and the obligations of the parties in crowdsourcing processes is of utmost importance for the success of the crowdsourcing applications. In this context, Brabham (2013) notes that the most successful crowdsourcing applica-

19 eJury pays to each juror between USD 5 and USD 10 depending on the length of the case. See http://www.ejury.com/jurors_learn_about.html (last visited Jan. 3, 2017). A juror participating in JuryTest gets between USD 5 and USD 50 per case. See <http://www.jury-test.net/index.cfm?action=howjur> (last visited Jan. 3, 2017). OnlineVerdict pays each of its jurors between USD 20 and USD 60 depending on the amount of time required to review the case. See <https://www.onlineverdict.com/jurors/juror-faqs/> (last visited Jan. 3, 2017).

tions have policies protecting both parties in crowdsourcing processes. For instance, the members of the crowd who attempt to perform tasks posted by companies on InnoCentive have to sign a non-disclosure agreement and an intellectual property agreement. The intellectual property agreement grants the company after receiving the submission a temporary ninety-day license to use the intellectual property in the submission (cf. Babham, 2013).

F6: Risk of too few participants

The sixth drawback is the risk of too few participants (cf. Goodman and Dingli, 2013). Crowdsourcing applications will be not effective if there are too few participants. As Cooke, Barker, and Lecumberri (2013) note in the context of crowdsourcing speech and hearing experiments, “simply placing an experiment online does not guarantee a large number of participants, regardless of how well designed the web interface is.” The recruitment of participants requires some form of advertising (cf. Cooke, Barker, Lecumberri, 2013).²⁰

F7: Information overload

Crowdsourcing applications may generate a huge amount of information, which can be difficult to analyse. For instance, in 2009, the White House began to allow Internet users to post comments on WhiteHouse.gov and registered MySpace, Twitter, and Facebook accounts. As a result, the White House Staff received so much information that it was physically impossible to read all the data obtained through crowdsourcing applications (cf. Carafano, 2012, p. 200; Van den Herik and Kok, 2013).

F8: Lack of representativeness

The crowd participating in crowdsourcing applications may not always meet the standard for statistical representativeness. The term “statistical representativeness” is defined by Macmillan as: “a sample-to-population relationship such that what was true about frequencies in the sample will be true also about frequencies in the population from which sample was drawn” (Gomm, 2008, p. 130). To illustrate the lack of statistical representativeness of crowdsourcing applications, it is worth referring to the predictions of the opinion polls about the outcome of the U.S. presidential election in 2016. Many opinion polls forecasted that the Democratic candidate (Hillary Clinton) would win with a modest lead (Barnes, 2016). However, the Republican candidate (Donald Trump) won, according to the election rules, with a significant lead.

20 Apart from advertising, providers of CODR services willing attract a large number of members of the crowd need to offer diverse incentives. For example, a CODR that incentivise the members of the crowd to participate in the procedure by providing them with financial remuneration and entertainment may attract more members of the crowd than a CODR procedure that rewards members of the crowd merely with financial remuneration. This is because the former will attract not only people looking for financial remuneration, but also people looking for entertainment.

2.1.2 Crowdsourcing in the field of law

Crowdsourcing is already used in the field of law. In particular, crowdsourcing is used (A) for legal research support and (B) for the provision of legal advice. We discuss both issues below.

A: The use of crowdsourcing for legal research support

With respect to the use of crowdsourcing for legal research support, Armstrong (2010) explores whether some of the challenges related to the open access to legal source materials, such as the lack of links between the materials, might be alleviated by the use of crowdsourced workers. His findings are that there is no reason why a crowdsourced production process might not be employed to extend access to legal materials and scholarship.

In the context of CODR, the work by Armstrong (2010) is particularly useful because it shows a way of implementing crowdsourcing in an ODR procedure, namely, using crowdsourcing for linking legal materials published by an ODR platform. In particular, crowdsourcing can be used to classify already decided cases. For instance, the members of the crowd can categorize CODR decisions by clicking through a category tree. Because such a classification will allow the disputants and the third neutral parties to easily find the decisions, which are relevant to their cases, it will facilitate the consistency of the decisions.

Bueno, Roggia, and Hoeschil (2014, pp. 201-202) implemented the ideas of Armstrong (2010) by developing a model of a crowdsourcing game, which allows the crowd to classify legal documents. Such a classification allows knowledge management applications to recognize the context of the search documents.

B: The use of crowdsourcing for the provision of legal advice

Concerning the use of crowdsourcing for the provision of legal advice, Robertson (2012, p. 26) predicts that, in the future, middle – class litigants will increasingly rely on crowdsourced legal advice. This would happen, she argues, because crowdsourcing applications allow litigants to quickly obtain reliable information (cf. Robertson, 2012, p. 10). For example, if a person going through a difficult divorce posts his concerns on Facebook, a large body of social connections will provide him with an opinion on whether his concerns are warranted. Thus, the individual will access the opinions of his social connections on Facebook through a process that would be difficult to replicate in person because it would require numerous conversations in an effort to determine who in his social circle may have relevant information (see Robertson, 2012, p. 11).

It should be noted that there is an existing crowdsourcing platform, which provides the users with the opportunity to receive low-cost, crowdsourced legal answers from a group of participating lawyers. The platform called LawPivot allows the users to enter a confidential legal question and

assign it to a category, e.g., “intellectual property”, “tax”.²¹ Then, the platform suggests lawyers to whom the users can send their legal questions (Miller and Meininger, 2013, p. 245).

Robertson’s predictions illustrate the potential of a CODR procedure allowing the crowd to post legal advice. PeopleClaim is an example of such a procedure.²² It is a CODR procedure using negotiation as a mechanism for resolving disputes. Unresolved claims can be posted publicly for review at the claimant’s option. In this case, any Internet user is entitled to post a resolution suggestion.²³

Due to the low cost of crowdsourcing solutions (see Subsection 2.1.1.E3), CODR procedures allowing the crowd to post legal advice can offer affordable legal guidance to self-represented litigants²⁴ who do not have financial resources necessary to retain counsel.²⁵

2.2 LITERATURE REVIEW ON ONLINE DISPUTE RESOLUTION (ODR)

The purpose of this section is to provide an understanding of ODR by analysing relevant literature. The understanding of ODR is essential for building a theoretical framework of CODR. The reason is the similarity between ODR and CODR, which stems from the fact that both types of dispute resolution use Internet as a part of the dispute resolution process. In the next subsections, we examine literature on the definitions of ODR (Subsection 2.2.1), the typologies of ODR (Subsection 2.2.2), the benefits of ODR (Subsection 2.2.3), and the drawbacks of ODR (Subsection 2.2.4).

2.2.1 Definitions of ODR

Below, we discuss (A) the role of the Internet versus the role of ICT with respect to the definition of ODR. Subsequently, we examine (B) the concept of ADR and analyse whether (C) ODR is a form of ADR. Then, we present (D) a working definition of ODR.

21 See www.lawpivot.com (last visited Jan. 3, 2017).

22 See www.peopleclaim.com (last visited Jan. 3, 2017).

23 See www.peopleclaim.com/WhatToExpect.aspx (last visited Jan. 3, 2017).

24 Self-represented litigants may be a considerable number. To illustrate, 17% of the parties in the Australian Federal Courts are self-represented (Richardson, Sourdin, Wallance, 2012, p. 25). During the fiscal year ending on 30th of September 2014, appeals submitted to U.S. Courts of Appeals by self-represented litigants amounted to 51% of all filings. See the article “Judicial Business 2014” published by the Administrative Office of the U.S. Courts on behalf of the Federal Judiciary on <http://www.uscourts.gov/statistics-reports/judicial-business-2014> (last visited Jan. 3, 2017).

25 A Canadian study (Macfarlane, 2013) and an Australian study (Dewar, Smith, Banks, 2000) revealed that between 75 and 80 per cent of self-represented litigants choose to be self-represented due to inability to pay for legal representation.

A: *The role of the Internet versus the role of ICT with respect to the definition of ODR*
 The boundaries of ODR are and probably will remain a debatable concept (cf. Cortés, 2010, p. 54; Ebner and Zeleznikow, 2016, p. 29). One side of the debate stresses that the use of the Internet should be the criterion for defining ODR processes (see Schiavetta, 2004; Farah, 2005; Mann, 2009). The other side of the debate argues that the criterion for defining ODR processes is the use of Information and Communication Technology (ICT) (see Katsh, Rifkin, 2001, p. 117; Hörnle, 2004, p. 2; Cho, 2009, p. 11).²⁶

The difficulties in defining ODR stem from the variances in the linguistic interpretation of the term “online”. For example, according to the *Oxford Advanced Learner’s Dictionary*, the term “online” means “controlled by or connected to a computer or to the Internet”.²⁷ Such interpretation of the term “online” supports the use of ICT as a criterion for defining ODR. However, *Longman Dictionary of Contemporary English* defines “online” as “connected to other computers through the Internet, or available through the Internet”.²⁸ This interpretation is in accordance with the use of the Internet as a criterion for defining ODR.

The use of the term “the Internet” as a criterion for defining ODR will exclude dispute resolution procedures using a Local Area Network (LAN) from the scope of the definition. LAN is a communication network that interconnects a variety of data communications devices within a small geographic area and transmits data at high data transfer rates (cf. White, 2010, p. 196). The Internet is an interconnection of multiple LANs, i.e., a network of networks (cf. Bordone, 1998).

Because a narrow criterion will exclude dispute resolution procedures using LAN from the scope of ODR, the use of this criterion would make the application of the definition of ODR more complex. The reason is that the same dispute resolution procedure, depending on whether it uses LAN or the Internet, may be defined as both “online” and “offline” dispute resolution. For the sake of clarity, we prefer using the broader criterion of ODR.

26 ICT consists of hardware, software, networks, and media for collection, storage, processing, transmission, and presentation of information (voice, data, text, images). See Information & Communication Technology sector Strategy Paper of the World Bank Group published in 2002, p. 3. Available at: <http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/SSPwithAnnexes.pdf> (last visited Jan. 3, 2017). This broad definition of ICT allows for the inclusion of any technology that facilitates by electronic means the creation, storage management and dissemination of information.

27 The Oxford Advanced Learner’s Dictionary available at <http://oald8.oxfordlearnersdictionaries.com> (last visited Jan. 3, 2017).

28 See Longman Dictionary of Contemporary English available at <http://www.ldoceonline.com/dictionary/online> (last visited Jan. 3, 2017).

B: The concept of ADR

There are two ways for defining Alternative Dispute Resolution (ADR). In particular, ADR can be defined either narrowly as encompassing non-litigation processes to resolve agreements to the satisfaction of all parties (cf. Breger, Schatz, and Laufer, 2001, p. 35) or broadly as encompassing out-of-court dispute resolution proceedings (cf. Emerson, 2009, p. 66).

The word “alternative” in the narrow definition has the meaning of alternative to litigation. The word “alternative” in the broad definition of ADR means alternative to court proceedings. The difference in the definitions is important because the same procedure may be regarded as ADR under the broad definition and not regarded as ADR under the narrow definition. For example, this is the case for the Alberta’s Judicial Dispute Resolution (AJDR) provided by the Provincial Court and the Court of Queen’s Bench in the Canadian Province Alberta.²⁹ AJDR is a confidential pre-trial settlement conference led by a judge.³⁰ Disputants must voluntarily agree to participate in AJDR. The objective of AJDR is “to resolve the dispute so a trial will be either unnecessary, or at most limited to those issues on which the parties do not agree.”³¹ If the disputants do not reach an agreement, the judge may give a non-binding opinion of what decision the judge would make if the same case was presented at a trial. Although AJDR is a court proceeding, it is not a litigation proceeding because litigation involves a third party making a decision binding on the disputants (cf. Hörnle, 2009, p. 47).

ADR mechanisms can be divided into two groups, namely, (1) facilitative mechanisms and (2) adjudicative mechanisms (see Atlas, Huber, and Trachte-Huber, 2000, p. 18).³² While the facilitative mechanisms have no binding force on the parties, the adjudicative mechanisms involve decisions by third parties that legally bind the parties. The third party in facilitative mechanisms assist the disputants to (1) identify the issues of the dispute, (2) develop strategies for addressing those issues, and (3) reach an agreement about particular issues or the entire dispute (cf. NADRAC, 2003, p. 4)

Because ADR is often defined as what it is not, it tends to encompass a variety of procedures through which disputants may resolve their disputes (see Avruch and Black, 1996, p. 47). Such procedures include, but are not limited to (B1) negotiation, (B2) mediation, (B3) arbitration, or a combination of them (Greenwood, 2008). The three main types of ADR processes mentioned above are briefly discussed below.

29 See Guidelines for Judicial Dispute Resolution (JDC) available at <http://www.alberta-courts.ab.ca/ca/practicenotes/1.pdf> (last visited Jan. 3, 2017).

30 See the official webpage of the Judicial Dispute Resolution (Alberta) accessible at <http://www.justice.gc.ca/eng/fl-df/fjs-sjf/view-affic.asp?uid=88> (last visited Jan. 3, 2017).

31 See the official webpage of the Judicial Dispute Resolution (Alberta) accessible at <http://www.justice.gc.ca/eng/fl-df/fjs-sjf/view-affic.asp?uid=88> (last visited Jan. 3, 2017).

32 Adjudicative mechanisms are also known as determinative mechanisms (cf. Schiavetta, 2008, pp. 36-38).

B1: Negotiation

Negotiation can be defined as a deliberative process in which two or more parties enter into discussion for the purpose of achieving an agreement that is advantageous to all participants (cf. Anderson, 2011). It should be noted that negotiation is not always voluntary. Disputants involved in grievances, civil suits, and divorces are sometimes required to negotiate (see Mayer, 2012, p. 214).

Negotiators can use two approaches to meet their needs, namely, a distributive approach and an integrative approach (Mayer, 2012, p. 218). The distributive approach to negotiation is about gaining as large a share of the available benefits as possible (cf. Mayer, 2012, p. 218). The integrative approach is about increasing what is available for all and making sure everyone's needs are adequately addressed (cf. Mayer, 2012, p. 219).

B2: Mediation

Mediation can be defined as the intervention of a third party to help disputants communicate with each other about how to deal in the best way with a conflict (cf. Mayer, 2012, p. 271). An important characteristic of mediation is that the mediator does not decide the outcome of the dispute.³³ The mediator merely assists the disputants to find a solution for the dispute. The assistance includes listening to all of the parties and allowing them with the opportunity to present their most powerful arguments in an effective way. Mediation is most often voluntary (Lodder and Zeleznikow, 2010, p. 3). However, there are exceptions in several U.S. states, Belgium, and a number of Australian jurisdictions (Lodder and Zeleznikow, 2010, p. 4).

B3: Arbitration

Arbitration can be defined as a process in which one or both of the parties involved have agreed by contract to submit unresolved issues to a neutral third party of which the decision shall be binding on all parties involved (cf. Carrell, M., Heavrin, C. 2008, p. 180). While some jurisdictions require arbiters to have legal background (e.g., India and France), other jurisdictions do not require arbiters to be legally qualified (see Lodder and Zeleznikow, 2010, p. 4). Disputants may select an arbiter on the basis of his/her expertise, e.g., accountant or an engineer (see Lodder and Zeleznikow, 2010, p. 4).

It should be noted that the recognition and enforcement of foreign arbitral awards is relatively easy because of the New York Convention, which allows arbitral awards made in one Convention country to be recognised

33 The mediator may evaluate the content of the dispute (Lodder and Zeleznikow, 2010, p. 3).

and enforced in any of the other Convention countries.³⁴ At present, 156 countries are parties to the New York Convention.³⁵

It is worth mentioning that, because the New York Convention is considered to have a pro-enforcement bias, the courts interpret the permissible grounds for non-enforcement quite narrowly (see Moses, 2012, p. 3). This leads to the enforcement of the vast majority of awards. However, the enforcement of ODR arbitration awards has not been tested yet (Wrbka, 2014, p. 101). Many scholars argue that the New York Convention may, in principle, apply to binding ODR arbitration awards (Kaufmann-Kohler and Schultz, 2004, pp. 216-223; Edwards and Wilson, 2007; Cortés, 2010, pp. 111-112).

C: ODR as a form of ADR

It is debatable whether ODR is a form of ADR. On one side of the debate, Farah (2005), Zondag and Lodder (2007), and Cortés (2010) define ODR as a form of ADR. On the other side of the debate, Kaufmann-Kohler and Schultz (2004, p. 7) define ODR as a process including not only ADR, but also court proceedings.

If we define ODR as a form of ADR, we will bring ourselves outside the scope of ODR court proceedings that use ICT to a large extent.³⁶ An example of such a court proceeding is the European Small Claims Procedure.

The European Small Claims Procedure was established by Regulation (EC) No 861/2007.³⁷ The Regulation (EC) No 861/2007 defines “Small claims” as cases concerning sums under EUR 2000, excluding interest, expenses, and disbursements. The cases are resolved by national courts of the EU Member States. Judgements delivered under the European Small Claims Procedure are recognised and enforceable in the other Member States without the need for a declaration of enforceability.

Pursuant to Article 4(1) of the Regulation (EC) No 861/2007, the claimant shall commence the procedure by filling in a standard claim and lodging it with the court or tribunal with jurisdiction directly, by post or by any other means of communication, such as fax or email, acceptable to the Member State in which the procedure is commenced. Article 8 of Regulation (EC) No 861/2007 states that the court or tribunal may hold an *oral hearing*

34 See the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, also known as the New York Convention, adopted by a United Nations diplomatic conference on 10 June 1958 and entered into force on 7 June 1959. The text of the New York Convention is available on http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/NYConvention.html (last visited Jan. 3, 2017).

35 See the Status of the Convention on the Recognition and Enforcement of Foreign Arbitral Awards provided by the website of United Nations Commission on International Trade Law (UNCITRAL) available on http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/NYConvention_status.html (last visited Jan. 3, 2017).

36 There is an increasing interest in implementing ODR in court proceedings (Lodder, 2016).

37 Regulation (EC) No 861/2007 of the European Parliament and of the Council of 11 July 2007 establishing a European small claims procedure.

through a videoconference or another communication technology if the technical means are available. Article 9 of Regulation (EC) No 861/2007 states that the court or tribunal may also admit the *taking of evidence* through videoconference or other communication technology if the technical means are available.

If we accept that ODR is a form of ADR, we will need to exclude dispute resolution procedures, such as the European Small Claims Procedure, from residing under the scope of ODR. However, it is not feasible to exclude any procedure that may be entirely conducted through the Internet from residing under the scope of ODR. Therefore, for the purposes of this thesis, we will use a definition of ODR that encompasses ADR as well as court proceedings.

D: Working definition of ODR

As a working definition, we will use the aforementioned definition provided by Kaufmann-Kohler and Schultz (2004, p. 7). The reason is that it is the *only* definition of ODR that encompasses (1) ADR processes, and also (2) court proceedings. In order to take into account our preferences with regard to the use of the term "ICT" as a criterion for defining ODR, we modify the definition provided by Kaufmann-Kohler and Schultz as follows.

Definition 2.2 (ODR): *ODR is a broad term that encompasses forms of ADR and court proceedings, which use ICT as a part of the dispute resolution process.*

Here, it should be noted that ODR encompasses processes in which the use of ICT comprises a substantial portion of the dispute resolution (cf. Fox, 2009, p. 401). Otherwise, any ADR or court procedure using ICT will be regarded as an ODR procedure. ODR procedures in which the use of ICT comprises a substantial portion of the dispute resolution include, for example, procedures where the parties communicate mainly through ICT tools, such as email messages, voice through IP, and videoconferences.

2.2.2 Typologies

A review of ODR literature reveals that the following five categories of ODR methods have been used to describe the state of play in ODR: (A) technology assisted negotiation; (B) online mediation; (C) online customer complaint management; (D) online ombudsman; (E) online arbitration; and (F) early neutral evaluation. Below, each of these methods is explained in some details.

A: Technology assisted negotiation

Technology assisted negotiation is a negotiation process enhanced by technological tools. The tools perform actions that are normally performed by a mediator (cf. Kaufmann-Kohler and Schultz, 2004, p. 14). The dispute reso-

lution systems used by eBay³⁸ and Squaretrade³⁹ are forms of technology-assisted negotiation (cf. Katsh, 2009, p. 237). On these two cases, the communication between parties takes place via password-protected websites. Most of the communication is controlled and shaped through web forms allowing the parties to select among various choices. The use of web forms, instead of email messages, provides fewer opportunities for uncontrolled communication, which, in turn, focuses the attention of the disputants on possible options for settlement (see Katsh, 2009, p. 237).

Technology assisted negotiation includes blind bidding systems. Disputing parties using blind bidding systems are allowed to submit settlement offers to a computer. If the settlement offers are within a certain range, the computer automatically splits the difference. Blind bidding is particularly attractive to the disputants, because the offers are never revealed if the parties do not reach a settlement (Moffitt and Bordonne, 2012, p. 430). Up until the present moment, blind bidding has been employed mainly in claims against insurance companies because such claims are normally settled through negotiation (see Moffitt and Bordonne, 2012, p. 430).

B: Online mediation

Online mediation is the online form of traditional mediation (cf. Tang, 2009, p. 154). Online mediators are humans who use various technological means, such as instant messaging/chat room, email, and video conferencing, to replicate the traditional mediation process (Kaplan, 2009, p. 139). Online mediators employ techniques similar to their offline counterparts, such as establishment of ground rules framing the boundaries of mediation, identification of issues, clarifying and detailing respective interests and objectives, searching for objective criteria, identifying options, discussing and analysing solutions, adjusting and refining proposed solutions, and summarizing the agreement in writing (cf. Bidgoli, 2003, p. 752).

C: Online customer complaint management

In an online customer complaint management system, the procedures for submitting, recording, evaluating, and taking action on customer complaints are conducted partially or entirely online. Usually, such systems allow the complainant to check online the status of the complaint at any time (cf. Sundberg and Huggins, 1997, p. 182).

At present, both private companies and public organisations use online complaint management systems. For example, many companies in the United Kingdom use the online consumer complaint management system provided by mycustomerfeedback.com.⁴⁰ The system allows the companies to capture customer complaints and feedback easily by using a web-based

38 For more information on the ODR provided by eBay, please visit <http://pages.ebay.com/help/buy/resolving-problems.html> (last visited Jan. 3, 2017).

39 See <http://www.squaretrade.com> (last visited Jan. 3, 2017).

40 See <http://www.mycustomerfeedback.com> (last visited Jan. 3, 2017).

interface. The online customer complaint management system used by the Stoke-on-Trent City Council is an example of a system used by a public organisation.⁴¹ The system allows the customers to submit an online complaint to the Council (cf. Cook, 2012, p. 61). In order to submit the complaint, the customer would need to fill out an online form available on the website of the Council. The Council will try to respond to the complaint within 10 working days. If the complainant is not satisfied with the response of the Council, he may request an investigation by an independent investigator within the Council. The request can be made by email. The investigation will be conducted by a Complaint Investigation Officer together with a senior manager not involved in the original complaint.⁴²

D: Online ombudsman

The function of the ombudsman is to protect individuals from unlawful acts committed by the public administration (cf. Reif, 2004, p. 79). In order to perform that function, the ombudsman is entitled to take complaints, investigate conflicts, and help to resolve these conflicts (see Ziegenfuss and O'Rourke, 2010, p. 19). The online ombudsman allows the complainant to submit the complaint through the Internet and/or manage its complaint online. For example, the Dutch National Ombudsman allows the complainant to submit an online complaint and to further communicate with the Ombudsman through email.⁴³

E: Online arbitration

Arbitration can be defined as the resolution of a dispute between two or more parties by a third person (arbitrator) who derives his powers from an agreement of the parties, and whose decision is binding on them (cf. Van den Berg, 1981, p. 44).⁴⁴ In comparison with traditional arbitration, online arbitration proceedings are conducted entirely by email or other means for electronic communication (see Coteanu, 2004a, p. 92). The online arbitration can be non-binding, self-enforceable, or legally binding.

41 See a section of the website of Stoke-on-Trent City Council entitled "Customer Feedback." Available on <http://www.stoke.gov.uk/ccm/content/council-and-democracy/customer-feedback/customer-feedback.en> (last visited Jan. 3, 2017).

42 See a section of the website of Stoke-on-Trent City Council entitled "Customer Feedback." Available on <http://www.stoke.gov.uk/ccm/content/council-and-democracy/customer-feedback/customer-feedback.en> (last visited Jan. 3, 2017).

43 See the section of the official website of the Dutch National Ombudsman entitled "How can you complain to the National Ombudsman?" Available at <http://www.nationaleombudsman.nl/how-can-you-complain-national-ombudsman> (last visited Jan. 3, 2017).

44 Sample arbitration provisions requiring parties of a contract to have recourse on online arbitration already appeared in the legal literature. An example of such a provision reads as follows: "The parties agree that the parties and the arbitration panel shall conduct the proceedings, document exchanges, and the issuance of the decision, via a secure Internet connection. Evidence, if any, shall be submitted in a digital writing, signed with an authenticated digital signature, under oath and subject to the laws of perjury" (Hill Bro, 2004, p. 137).

Non-binding online arbitration is a settlement-oriented online dispute-resolution process that produces a non-binding decision. The entire procedure, including the submission of the facts and the delivery of the non-binding decision, is conducted through the Internet. Online non-binding arbitration aims to provide the parties with an expert assessment of the strengths and weaknesses of their respective positions. The non-binding arbitration may provide the last opportunity for an out-of-court resolution of the dispute (cf. Townsend, 2011, p. 37).

Self-enforceable online arbitration is an arbitration procedure of which the decisions are enforced by a private authority. The first well known online dispute resolution procedure of which the decisions are enforced by a private authority is the Uniform Domain Name Dispute Resolution Policy (UDRP). The enforcement of the decisions rendered by UDRP panels is performed by cancelation, transfer, or other changes to domain name registrations (cf. Van den Herik and Dimov, 2011a, p. 247). The private authority enforcing the UDRP decisions is ICANN's accredited registrar that registered the disputed domain name. ICANN-accredited registrars are organisations or commercial entities registered with the ICANN to administer and sell domain names (cf. Uys, 2010, p. 59). Every entity willing to become an ICANN-accredited registrar must sign a "Registrar Accreditation Agreement" obliging that entity to comply with UDRP decisions.

Legally binding arbitration renders decisions that are binding to the disputants. An example of legally binding arbitration conducted through the Internet is Net-Arb (<http://www.net-arb.com/>). Net-Arb works as follows. At the beginning, the complainant fills out an online form and submits it to the provider of the online arbitration services. The online form contains information about the parties and their dispute. When the two parties agree to arbitrate, the provider notifies the parties by sending them an email. Then, the provider reviews the description of the dispute provided by the complainant. Based on expert knowledge, the provider assigns arbitrators who understand the subject matter of the dispute. Once the arbitrators are appointed, the parties receive an email with instructions for their hearing. During the hearing phase, all of the testimony and evidence is exchanged by email. Afterwards, the arbitrator will render a written legally binding arbitral award.⁴⁵

It should be noted that the arbitral awards rendered through online arbitration may not be recognized and enforced under the New York Convention because, pursuant to Article 2 of the New York Convention, it applies only to agreements "in writing" (cf. Wang, 2010, p. 157). However, online arbitral agreements would appear to satisfy the writing requirements of the convention. The reason is that, under most national legislation, electronic writings are considered equivalent to traditional writings (cf. Cortés, 2010, p. 112).

45 See section "How net-ARbitration Works" of the website <http://www.net-arb.com> available at http://www.net-arb.com/how_arbitration_works.php (last visited Jan. 3, 2017).

F: Early neutral evaluation

Early neutral evaluation is a dispute resolution process that aims to facilitate negotiations, and not to decide the case (cf. Carper and McKinsey, 2011, p. 178). The process is conducted by a third-party neutral who conducts a hearing and issues an opinion regarding the strength and weakness of evidence and the outcome of the case (cf. Carper and McKinsey, 2011, p. 178). Oral presentations and written submission are usually limited in length. Early neutral evaluation is appropriate for cases in which disputants have unrealistic expectations about the outcome of the case (Carper and McKinsey, 2011, p. 178).

2.2.3 Benefits of ODR

Compared to the offline forms of dispute resolution, ODR has six benefits, viz. (1) saving transportation costs, (2) fast speed, (3) access to external expertise, (4) avoidance of violent conflicts, (5) enabling parties located in different countries to participate in real-time hearings, and (6) increased access to justice (cf. Anttiroiko and Mälkiä, 2007, p. 1270; cf. Lodder and Zelezikow, 2010, p. 13). They are briefly described below.

The first benefit of ODR is that it saves transportation costs (cf. Anttiroiko and Mälkiä, 2007, p. 1270). This is because the parties, even if they are located in different countries, can participate in a real-time hearing without the need to spend time and financial resources for traveling to the place of the hearing (cf. Lodder and Zelezikow, 2010, p. 13).

The second benefit of ODR is that it is faster than the usual offline procedures. This is because the parties do not need to attend the venue of the meetings physically. The high speed of ODR procedures makes them particularly appropriate in the current business environment where consumers and business companies expect that any service they need should be available online, twenty four hours a day (cf. Gopasalmu, 2009, p. 74).

The third benefit of ODR is that it allows the parties to access expertise outside their local area (cf. Anttiroiko and Mälkiä, 2007, p. 1270). Thus, through ODR, parties may find a third neutral party located thousands of miles from them that has extensive experience in dealing with the issues concerned. For example, the ODR platform eQuibbly allows disputants to invite one or more arbitrators from a list of arbitrators published on the website of eQuibbly.⁴⁶ The list of the arbitrators contains the names of the arbitrators, their hourly fee, and a brief summary of their professional experience.

The fourth benefit of ODR is that it allows disputants who have a history of violence to resolve their disputes without physical meetings, which may evolve in violent conflicts (cf. Lodder and Zelezikow, 2010, p. 13).

46 The list of the arbitrators is published on <https://www.equibbly.com/professionals> (last visited Mar. 15, 2014).

The fifth benefit is that it provides a real time venue, which may facilitate the resolution of cross-border disputes (cf. Lodder and Zelezikow, 2010, p. 13).

The sixth benefit of ODR is that it improves justice for people who are isolated or disabled, but have access to ICT and know how to use it (cf. Anttiroiko and Mälkiä, 2007, p. 1270). Often, such people have to put much effort in physically attending the court or the place where the dispute resolution takes place.

2.2.4 Drawbacks of ODR

Below, we mention five drawbacks of ODR, viz. (1) lack of face-to-face communication, (2) inequality between users who are familiar with ICT and those who are not, (3) information security vulnerabilities of ODR platforms, (4) the lack of transparency, and (5) the lack of trust in ODR procedures (cf. Rule, 2003, p. 98-99; Anttiroiko and Mälkiä, 2007, p. 1270; Cortés, 2010, p. 58; cf. Bird, Reder, Darrow, Lichtenstein, Aresty, and Klosek, 2011, p. 256).

The first drawback of ODR is that the text-based methods, which are the main communication method used in ODR, may lead to misinterpretations (cf. Anttiroiko and Mälkiä, 2007, p. 1270). The reason is that they do not allow distinguishing of tones, inflections, and facial expressions (see Epstein, 2012, p. 423). However, the use of high-quality video technologies may remove this drawback.

The second drawback of ODR is that it puts parties who are not familiar and comfortable with the relevant technology and tools in a disadvantageous situation (cf. Cortés, 2010, p. 58). Yet, this problem may be addressed by providing the disputants with training related to the use of IT and user manuals. Moreover, as increasingly more people use computers on a regular basis, the importance of this drawback will decrease.

The third drawback is that criminals may exploit the information security vulnerabilities of the ODR platform in order to obtain unauthorized access to information related to the dispute and the disputants. That is why the ODR provider should use information security practices (cf. Lodder and Zeleznikow, 2010, p. 38). However, in order to gain the trust of the disputants, the ODR provider should not only use such information security practices, but also publicly disclose those practices. In this regard, it should be noted that, in Section VII of the Best Practices for Online Dispute Resolution Service Providers, the American Bar Association Task Force on e-Commerce and ADR recommends that ODR providers disclose what kinds of security mechanisms have been put in place to safeguard participant information.⁴⁷

47 See Recommended Best Practices for Online Dispute Resolution Service Providers published by the American Bar Association Task Force on e-Commerce and ADR in 2002. The online version of the Recommended Best Practices for Online Dispute Resolution Service Providers is available at http://www.americanbar.org/content/dam/aba/migrated/2011_build/dispute_resolution/best_practices_final_102802.authcheckdam.pdf (last visited Jan. 3, 2017).

The fourth drawback is the lack of transparency. The charges of a lack of transparency stem from the fact that, similarly to ADR procedures, most ODR procedures are private (cf. Bird, Reder, Darrow, Lichtenstein, Aresty, and Klosek, 2011, p. 256). Such private procedures often do not allow the public to receive sufficient information about the procedures. It should be noted that transparency may relate to three different aspects of an ODR system, namely, (1) to the governance structure, (2) the dispute resolution personnel, and (3) the dispute resolution process itself (cf. Kaufmann-Kohler, Schultz, 2004, p. 110). In order to ensure a transparent governance structure, the provider of online dispute resolution services should disclose the contact details of the provider, the location of the provider, and the sources of funding. In order to ensure a transparent dispute resolution personnel, a provider of online dispute resolution services should disclose the names of the neutrals, the neutral's qualifications, and the experience. Such a disclosure will allow the parties to find out if there is a conflict of interest between them and the neutrals. In order to ensure a transparent dispute resolution, the provider of online dispute resolution services should publish a clear description of the procedure, including, but not limited to, the costs, the character of the outcome (e.g., binding decision or non-binding decision), and substantive rules or principles governing the procedure.

The fifth drawback of ODR procedures is the lack of trust in these procedures caused by the non-face-to-face communication used in such procedures (cf. Rule, 2003, p. 98-99). People who do not trust each other may act tentatively and keep important information to themselves (cf. Van Veenen, 2012, p. 102). As a result, disputants participating in ODR processes may not disclose all the relevant information to online mediators and online arbitrators.

2.3 LITERATURE REVIEW ON CODR

As can be seen from our analysis in sections 2.1 and 2.2, there is a plethora of literature on crowdsourcing and ODR. However, the literature on the relationship between these two concepts is rather scarce. To our knowledge, CODR has been examined only by Rule and Nagarajan (2010), Van den Herik and Dimov (2011a, b, 2012a, b), Matic (2014), and Luz, Poblet, Silva (2016). This thesis is partly based on the articles written by Van den Herik and Dimov (2011a, b). Below, we briefly examine the works by Rule and Nagarajan (2010), Matic (2014), and Luz, Poblet, Silva (2016).

Rule and Nagarajan (2010) emphasise the need for innovative dispute resolution mechanisms by stating that the traditional dispute resolution providers are not able to cope with the huge number of online disputes. The reason is that the traditional dispute resolution services, including ODR, (1) have a high price, (2) do not meet the increased expectations of the internet users in relation to the speed of online services, and (3) require human resources (see Section 1.1). After stressing the need for an innovative dispute

resolution, Rule and Nagarajan discuss the operation of the ECRF and conclude that the use of crowdsourcing in a dispute resolution process can be a solution to the problems that traditional dispute resolution encounters. The reasons are that CODR requires (1) less financial resources, (2) less human resources than ODR and (3) provides a quicker dispute resolution.

Matic (2014) proposes a model of crowdsourced online arbitration, which ensures the confidentiality of the information submitted to the crowd. As part of the procedure, any materials delivered to the crowd should not contain confidential information. For example, pictures of persons should be scrambled or obfuscated (cf. Matic, 2014). The purpose of the procedure proposed by Matic is to use the advantages of crowdsourcing while keeping the confidential information about the parties in secrecy (Matic, 2014).

Luz, Poblet, Silva (2016, p. 285) identify three manifestations of the relationship between crowdsourcing and ODR, namely, (1) the use of ODR to aggregate micro-task output data, (2) the use of crowdsourcing to retrieve relevant information for ODR, and (3) the use of crowdsourcing to model an ODR through workflows of micro-tasks. In the first manifestation, ODR is used as a tool, which facilitates the aggregation of information gathered through crowdsourcing. For example, ODR can be used to distinguish between correct and incorrect information provided by crowdsourcing workers. In the second manifestation, the parties of ODR procedures receive crowdsourcing information which can be helpful for the resolution of the dispute. For instance, the crowd may provide the parties with suggestions on how to resolve the dispute. In the third manifestation, a part of or an entire ODR procedure is conducted by crowdsourced workers who act as computational units and their efforts are integrated with the ODR process. In the first manifestation, crowdsourcing exploits ODR. In the second and the third manifestations, ODR exploits crowdsourcing (cf. Luz, Poblet, Silva, 2016, p. 285).

While Rule and Nagarajan (2010) provide a general discussion on CODR, they did not define it and analyse it in details. In order to fill this gap in the literature, Van den Herik and Dimov (2011a) defined this new type of dispute resolution, described the present state of play, and built a theoretical framework by investigating CODR building blocks. The definition of CODR provided by Van den Herik and Dimov is based on the definition of ODR provided by Kaufmann-Kohler and Schultz (cf. Van den Herik and Dimov, 2011a, p. 245; Kaufmann-Kohler and Schultz, 2004, p. 7).⁴⁸ The definition of CODR provided by Van den Herik and Dimov reads as follows.

Definition 2.3 (CODR): *CODR is a term that encompasses some forms of ADR and court proceedings using the Internet and crowdsourcing as parts of the dispute resolution process.*⁴⁹

48 The definition on ODR provided by Kaufmann-Kohler and Schultz is mentioned in Section 2.2.1.

49 The concept of ADR was discussed in Subsection 2.2.1.B. The term “crowdsourcing” was defined in Subsection 2.1.1.A.

The definition is particularly important because it clearly differentiates CODR from other dispute resolution procedures, including ADR/ODR schemes in which the third neutral party is a collegial body.⁵⁰

2.4 CHAPTER SUMMARY

In the beginning of this chapter, we provided a literature overview of the two concepts that are at the center of CODR, namely, crowdsourcing and ODR. The literature review of crowdsourcing indicated that crowdsourcing can be an effective and powerful business model that is used in some popular websites, such as Amazon's Mechanical Turk, InnoCentive, and Wikipedia. Because of its popularity, crowdsourcing has been the object of many academic studies. Those studies provided us with a knowledge base for constructing a working definition of crowdsourcing and made us familiar with the benefits and drawbacks of crowdsourcing.

After defining crowdsourcing, we found out that the concept of crowdsourcing overlaps with other existing concepts, such as collaborative systems, user-generated content, collective intelligence, and Web 2.0. However, those concepts cannot be used interchangeably with crowdsourcing. The reason is that the concept of crowdsourcing refers to a business model while the aforementioned concepts do not explicitly refer to a business model. The terms collaborative systems, user-generated content, and Web 2.0 refer to technological developments. The term collective intelligence refers to the intelligence of a group of living organisms that arises from the interactions between those organisms.

Having obtained an understanding of crowdsourcing, we started reviewing the literature on ODR. Our first finding in relation to ODR was that, in comparison to the definition of crowdsourcing, the definition of ODR is debatable. In particular, the opinions differ on whether the use of Internet or the use of ICT should be the criterion for defining ODR as well as on whether or not ODR includes court proceedings. We analysed the different positions of the debate, expressed our preferences, and proposed our working definition of ODR.

We also examined the typology of ODR. In this regard, we found out that various types of ODR exist. The typologies of ODR, similarly to the typologies of ADR, are based on the different mechanisms for resolving disputes, e.g., negotiation, mediation, and arbitration. However, ODR gives rise to *suis generis* forms of dispute resolution, which do not have an offline

50 In an email dated 21st of December 2016, Pablo Cortés, an ODR expert, explained to us the need for differentiating between CODR, on one side, and other dispute resolution schemes in which the third neutral party is a collegial body, on the other side. Our definition clearly shows that the difference between CODR and other dispute resolution schemes in which the third neutral party is a collegial body is that the former use crowdsourcing for resolving disputes, whereas the latter do not do so.

counterpart. An example of such a *suis generis* form is technology assisted negotiation. Technology assisted negotiation is neither mediation nor pure negotiation. The reason is that, in technology assisted negotiation, the technology performs actions that are normally performed by a human mediator. However, because the procedure is conducted without the assistance of human mediators, it cannot be regarded as a form of mediation.

Next, we examined the benefits and drawbacks of ODR. We found six benefits of ODR, namely, (1) transportation costs, (2) fast speed, (3) access to external expertise, (4) avoidance of violent conflicts, (5) enabling parties located in different countries to participate in real-time hearings, and (6) increased access to justice.

The use of ICT in ODR brings not only benefits but also the following five drawbacks: (1) lack of face-to-face communication; (2) inequality between users who are familiar with ICT and those who are not; (3) information security vulnerabilities of ODR platforms; (4) the lack of transparency; and (5) the lack of trust in ODR procedures. Despite its drawbacks, ODR has been flourishing since the mid 1990s (Poblet, Casanovas, López-Cobo, Cabrerizo, Prieto, 2009, p. 206).

Having discussed the concepts of crowdsourcing and ODR, we proceeded with a discussion of CODR. In this regard, we found out that, despite a few articles on the topic, CODR is still a new and unexplored area. The existing contributions contain only partial explorations of the topic. The present thesis aims to shed more light into this field.

By providing a literature review of crowdsourcing, ODR, and CODR, we completed the first part of our research. The literature review provided us with the knowledge base that is necessary for answering the research questions.

In this chapter, we examine the past and the present CODR procedures. For the sake of systematic classification, we will divide the past and present CODR procedures into three groups, namely, CODR procedures functioning as (1) online opinion polls, (2) online mock jury systems, and (3) arbitration tribunals rendering self-enforceable decisions.¹ The functions of the online opinion polls are extraction and aggregation of information from the general public that may facilitate the resolution of disputes (see Jurca and Faltings, 2008, p. 119). The function of online mock jury systems is testing real cases before a mock jury (see Marder, 2006, p. 249). The function of arbitration tribunals rendering self-enforceable decisions is to resolve a dispute through a decision enforced by a private authority (see Van den Herik and Dimov 2011a).

Historically, CODR procedures that function as online opinion polls (see Section 3.1) and online mock jury systems (see Section 3.2) appeared in November 1999.² CODR procedures that function as arbitration tribunals rendering self-enforceable decisions (see Section 3.3) appeared in 2008 (Rule and Nagarajan, 2011, p. 99). In Section 3.4, we give our chapter conclusions.

3.1 ONLINE OPINION POLLS

Most CODR procedures are online opinion polls (cf. Marder, 2006, p. 240). Online opinion polls allow anyone to post his comment in relation to certain issues.³ Online opinion polls are a form of public opinion polls. The latter can be defined as the measurement of attitudes, feelings, needs, and intentions of a large body of people on important social, political, and economic issues (cf. Ugwuegbu, 2011, p. 186). The difference between the online opin-

1 It should be noted that the first two types have been distinguished by Marder (2006). Because there is a lack of literature on these two types of CODR, we will describe them mainly on the basis of the works by Marder. The third type of CODR was added by us.

2 The starting date of eJury can be found at http://www.ejury.com/about_co_bio.html (last visited Jan. 3, 2017). The starting date of iCourthouse can be found at http://www.icourthouse.com/main taf?area1_id=about&area2_id=pressreleases&redir=0 (last visited Jan. 3, 2017).

3 It should be noted that many public opinion polls are conducted online (cf. Renka, 2010). The difference between CODR procedures functioning as online opinion polls and online public opinion polls is that the former aim to facilitate the resolution of disputes, whereas the latter aim to measure the public opinion regarding certain matters.

ion polls and public opinion polls (cf. Friend and Singer, 2007) is that the online opinion polls are conducted through the Internet.

An analysis of the cases published on the online opinion poll called iCourthouse indicated that online opinion polls can be used to provide the parties involved with the public opinion about various kinds of disputes, including but not limited to family disputes, contract disputes, and personal injuries disputes.⁴

Because of their type of sampling (e.g., self-selected participants), online opinion polls are not representative. Moreover, it is possible for multiple voters to manipulate rating results (see Hong and Park, 2011, p. 3). Below, we partition this section into four parts. We examine (A) iCourthouse as an example of an online opinion poll. iCourthouse is the first CODR procedure functioning as an online opinion poll.⁵ Then, for comparison, we will provide brief descriptions of (B) two more opinion polls, viz. SideTaker and PeopleClaim. Subsequently, we discuss (C) the benefits of online opinion polls and (D) the drawbacks of online opinion polls.

A: *iCourthouse*

iCourthouse was founded in 1999 by Clyde Long and Claudia Hagadus Long, two lawyers from Lafayette, California, to provide a venue where the general online public can express its opinion about disputes posted by visitors of the website.⁶ Up until the present moment, 984 cases were published for resolution in iCourthouse.⁷ It should be noted that many of those cases contain meaningless messages.⁸ This clearly indicates the need for human moderation of the cases published on iCourthouse. Such moderation can be done by crowdsourcing workers or by the staff of iCourthouse.⁹

The dispute resolution procedure provided by iCourthouse is conducted entirely online. In order to participate in the procedure, the plaintiffs, the defendants, and the jurors should register at the website and accept iCourthouse's user agreement.¹⁰ The user agreement has a provision stating that (1) the users agree that iCourthouse, in its sole discretion, with or without

4 See the databases of cases published on iCourthouse - http://www.i-courthouse.com/main.taf?area1_id=cases (last visited Jan. 3, 2017).

5 <http://www.i-courthouse.com/> (last visited Jan. 3, 2017).

6 See http://www.i-courthouse.com/main.taf?area1_id=about&area2_id=pressreleases&redir=0 (last visited Jan. 3, 2017).

7 See http://www.i-courthouse.com/main.taf?area1_id=cases&area2_id=&start=0&page=1 (last visited Jan. 3, 2017).

8 For example, the complaint in case number 2016-11665 states: "fife fe f tea fe qef". The complaint in case number 016-11664 states "ka". The complaint in case number 2016-11663 states: "testtr".

9 For example, crowdsourcing workers can moderate the cases by enforcing quality control standards similar to the quality control standards enforced by Wikipedia contributors. For more information on these standards, see https://en.wikipedia.org/wiki/Wikipedia:Quality_control (last visited Jan. 3, 2017).

10 The user agreement of iCourthouse is available at http://www.i-courthouse.com/main.taf?area1_id=front&area2_id=useragreement (last visited Jan. 3, 2017).

notice, may terminate their use of the website and remove and discard any content within the website for any reason, and that (2) iCourthouse shall not be liable to the users or any third party in such an event.

Plaintiffs join iCourthouse, file their claim, and subsequently receive a case number and password. Then, plaintiffs and defendants submit their arguments and evidence to iCourthouse. The jurors select the cases they would like to decide from a list of all cases, i.e., the jurors are self-selected. Jurors review the contents of the submissions and are entitled to post questions to the litigants. Every juror is entitled to post his “verdict” and thus help the parties to reach an agreement. As it can be seen in Figure 3, the number of verdicts for the plaintiff (4) and for the defendant (1) are posted under the summary of the case. This is all that is made public. iCourthouse does not render aggregate decisions.

In case number 2005-11320, the plaintiff stated that the defendant did not perform his contractual obligation to pay the sum of USD 4500 in exchange for receiving an online character in a game. Five jurors posted verdicts in the case. Four of the verdicts were in favour of the plaintiff and one in favour of the defendant.¹¹

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| CASE NUMBER 2005-11320 | View plaintiff's trial book |
| Type of claim: Collect a Debt | View defendant's trial book |
| | Questions to Litigants |
| | Render a Verdict |
| <p>CASE SUMMARY: Offered to sell online character in game, Everquest. Buyer agreed to purchase for sum of \$4,500, on 3/4/05. Buyer insisted that I give him rights to the character and account before he paid, just to make sure all was as advertised. Gave buyer rights to character on 3/6/05. Buyer has not paid, as of 5/3/05. Requesting money from buyer. Am suing for breach of express contract.</p> | |
| <p>CASE STATUS: Verdicts for plaintiff: 4 Verdicts for defendant: 1</p> | |

Figure 3. Case Number 2005-11320 published on iCourthouse.com

The procedure offered by iCourthouse is a form of CODR because it falls within the scope of our definition of CODR.¹² Based on our definition, iCourthouse has to comply with the following three elements: (1) being an ADR or court procedure; (2) using the Internet as a part of the dispute resolution process; and (3) using crowdsourcing as a part of the dispute resolution process.

As regards to the first element (ADR or court proceedings), it should be noted that ADR procedures do not need actually to resolve the disputes.

11 Since iCourthouse does not specify how many jurors should vote in a case for a final decision to be rendered, it is not clear whether the plaintiff won case number 2005-11320. According to a “Frequently Asked Questions” document published by iCourthouse, if disputants want to get a final decision, they have to agree that “only the verdicts given before a specific date and time will count, or that only the first given number of verdicts will count.” See http://www.i-courthouse.com/main.taf?area1_id=front&area2_id=faqs (last visited Jan. 3, 2017).

12 We defined CODR in Section 2.3.

ADR procedures may simply provide the parties with an evaluation of their cases (Bansal, 2009, p. 7). This form of ADR procedures is called early neutral evaluation. The early neutral evaluation is an “ADR process which is preventive in nature, the object of which is to settle the dispute amicably at the earliest stage” (Bansal, 2009, p. 7). The early neutral evaluation aims to facilitate negotiations, not to decide the case (Carper and McKinsey, 2011, p. 178).

iCourthouse provides the parties with an evaluation report indicating the number of verdicts for the plaintiff and for the defendant. While the evaluation report is not binding, it may facilitate the negotiations between the parties. Consequently, the procedure provided by iCourthouse is a form of early neutral evaluation and, therefore, meets the first requirement for qualifying as a CODR procedure.

Concerning the second element (using the Internet), it should be noted that the early neutral evaluation procedure provided by iCourthouse is conducted entirely online. The parties submit their statements and evidences online. The jurors post their verdicts online. No part of the procedure can be conducted offline. Therefore, iCourthouse complies with the second element of our definition of CODR.

As for the third element (using crowdsourcing), we need to examine whether the procedure provided by iCourthouse uses crowdsourcing. In order to do so, we will assess whether the procedure falls within the scope of the definition of crowdsourcing provided by Howe (2006).¹³

The early neutral evaluation is usually performed by a judge, lawyer, arbitrator, or expert in a discipline relevant to the nature of the dispute (Ramsey and Telford, 2007, p. 885). iCourthouse outsources the function to be performed by a judge, lawyer, arbitrator, and expert. It does so to an undefined (and generally large) network of people in the form of an open call. The network is undefined (and generally large) because any Internet user can become a juror in iCourthouse.

Because (1) iCourthouse allows any Internet user to participate in the early neutral evaluation procedure and (2) the call is made publicly available on the website of iCourthouse, the call used by iCourthouse to outsource the function of evaluator falls within the scope of our definition of “open call”.¹⁴

On the basis of the foregoing observations, we may conclude that iCourthouse falls within the scope of the definition of crowdsourcing provided by Howe (2006). Therefore, the procedure offered by iCourthouse meets the third requirement for qualifying as a CODR procedure.

B: Two more online opinion polls

Below, we briefly discuss two additional examples of online opinion polls, namely, (B1) SideTaker and (B2) PeopleClaim.

13 The definition of crowdsourcing provided by Howe (2006) is examined in Section 2.1.

14 The term “open call” was defined in Section 2.1.

B1: SideTaker (www.sidetaker.com).

SideTaker allows U.S. residents complying with the Terms of Use of SideTaker to submit a claim by using the Internet and tell their part of the story.¹⁵ Then, SideTaker will send an email to the defendant to an email address provided by the claimant and invite the defendant to submit his response to SideTaker by using the Internet. In comparison to iCourthouse, SideTaker does not display the number of the decisions for and against the disputants, but instead displays the percentage reflecting the votes for and against the disputants (see Figure 4).



Figure 4. A screenshot of SideTaker

Figure 4 displays the percentage reflecting the votes for and against the disputants in three disputes, namely, “Letting Kids Sleep On Hotel Comforter”, “Interns are Ruining the Workplace”, “Wanting a Keurig But Getting a Mr. Coffee”. The first dispute relates to whether hotel comforters are sufficiently clean so as to ensure that the children sleeping on them will not become sick. The second dispute concerns the advantages and disadvantages of hiring interns (also known as trainees). The third dispute relates to whether the beverage brewing system “Keurig” is better than the beverage brewing system “Mr. Coffee”.

Furthermore, the procedure offered by SideTaker does not allow the parties to submit multiple files containing evidence. The parties can only submit textual information and a photo. The disputes in Sidetaker are grouped in fifteen categories, namely, (1) Bitter ex, (2) Dating, (3) Entertainment, (4) Family, (5) Friends, (6) General, (7) Marriage, (8) Money, (9) Neighbours, (10) Parent/Child, (11) Parenting, (12) Politics, (13) Roommates, (14) Technology, and (15) Workplace/Co-workers.

The procedure provided by SideTaker qualifies as a CODR procedure within the meaning of our definition of CODR because it: (1) is a form of early neutral evaluation; (2) is conducted entirely online; and (3) uses crowd-

15 Pursuant to the Terms of Use of SideTaker, the users of SideTaker have to comply with the following requirements: (1) the registration information submitted by them should be truthful and accurate; (2) the users should maintain the accuracy of registration information; (3) the users should be 13 years of age or older; (4) the users should be residents of the United States of America; and (5) by using SideTaker, the users should not violate any applicable law or regulation. See the Terms of Use of SideTaker available on <http://www.sidetaker.com/terms.php> (last visited Jan. 3, 2017).

sourcing. More particularly, the procedure provided by SideTaker uses crowdsourcing because it takes the function of evaluator once performed by a judge, lawyer, arbitrator, or expert, and outsources it to an undefined (and generally large) network of people in the form of an open call.

B2: PeopleClaim (www.peopleclaim.com)

PeopleClaim provides the disputants with a web-based negotiation platform.¹⁶ In order to use the platform, the disputants need to register an account on PeopleClaim. The negotiation platform allows the claimant to submit a claim of up to 20,000 characters. After the claimant finishes writing the claim, PeopleClaim requests him to mention what kind of resolution he seeks, e.g., money or non-cash settlement. The next step of filing the complaint is the insertion of the contact details of the respondent. Afterwards, the claimant can send the complaint to the respondent. An important characteristic of PeopleClaim is that, by ticking a box before sending the complaint, the claimant will send the claim not only to the respondent, but also to regulators, watchdogs, and media as well as to lawyers and mediators who are willing to provide a free legal consultation.

Having received the claim, the respondent can use the platform provided by PeopleClaim to negotiate a settlement of the dispute. The negotiations between the disputants are private, i.e., the communications between the disputants are not made publicly available. If the disputants do not resolve their dispute through negotiation, the claimant can make his claim public. Then, any Internet user will be able to comment on the claim and propose suggestions for the resolution of the dispute. The comments are visible in a section titled “Suggestions from the public.” For example, in case 47048 posted on PeopleClaim, an Internet user suggested to the victim of a fraudulent act to send letters describing his complaint to the U.S. Federal Trade Commission, the Attorney General of Arizona, and the U.S. General Attorney (see Figure 5).

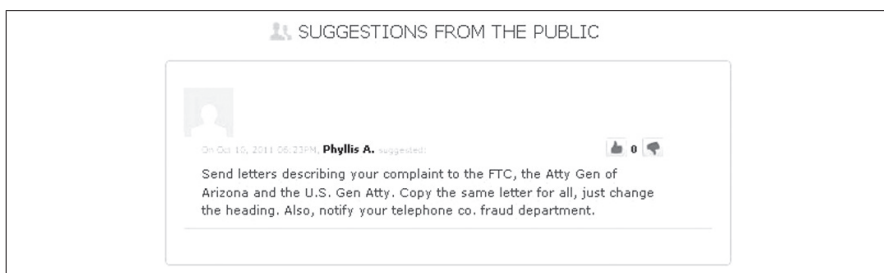


Figure 5. A screenshot of a comment of an Internet visitor in relation to case 47048 posted on PeopleClaim

¹⁶ As of 30th of December 2016, more than 50,000 businesses and consumers have used PeopleClaim.com. See <http://www.peopleclaim.com/> (last visited Jan. 3, 2017). PeopleClaim has a particular significance in the field of CODR as it demonstrates that CODR can effectively use not only adjudicative processes, but also facilitative processes.

PeopleClaim qualifies as a CODR procedure within the meaning of our definition of CODR because PeopleClaim complies with the three elements of the definition.

In relation to the first element (ADR or court proceedings), PeopleClaim uses a procedure known as expert opinion. The expert opinion refers to an ADR procedure allowing the parties to request an expert opinion concerning one or more aspects of the case at any stage of a dispute (See Paulsson, 1999, p. 111). For example, the International Chamber of Commerce offers “expert advice in settling business disputes.”¹⁷ The procedure provided by PeopleClaim allows the parties to request the opinion of Internet users having expertise related to the resolution of the dispute at stake. Therefore, being an ADR procedure, the procedure provided by PeopleClaim meets the first element of our definition of CODR.

Pertaining to the second element (using the Internet), the expert opinion procedure provided by People Claim is conducted entirely online. More particularly, the negotiations between the parties are conducted online and the third parties provide their opinion online. Therefore, PeopleClaim meets the second requirement for qualifying as a CODR procedure.

Pertaining to the third element (using crowdsourcing), the expert opinion in ADR is usually provided by an independent expert on the basis of an independent contractor agreement (see Paulsson, 1999, p. 111). PeopleClaim outsources the function once performed by an independent expert and outsources it to an undefined (and generally large) network of people in the form of an open call. The network is undefined (and generally large) because any Internet user may provide his opinion in relation to a dispute published on PeopleClaim. Therefore, PeopleClaim meets the third element of our definition of CODR.

C: Benefits of online opinion polls

An online opinion poll brings five benefits to the parties participating in the dispute (cf. Marder, 2006, pp. 242-247). They are stated below.

- (1) A party who feels wronged has a place to give an expression to its feeling. In some cases, the defendant can be swayed by the number of supporters on behalf of the plaintiff. The public opinion may be all that is needed to persuade the defendant to change his mind.
- (2) Some parties might feel uncomfortable to uncover their personal stories in their own communities. Since the parties in the online opinion polls are anonymous, they will not be afraid to post their disputes.
- (3) The parties use plain language. Since the jury is composed of laypersons, there is no need to use a legalistic language.

17 See the webpage of the International Chamber of Commerce concerning expert advice in settling business disputes available on <http://www.iccwbo.org/products-and-services/arbitration-and-adr/expertise/> (last visited Jan. 3, 2017).

- (4) Online opinion polls may facilitate the resolution of disputes in a very short time. The reason is that the jurors can provide their feedback within hours from the posting of the dispute by the claimant.
- (5) Online opinion polls are freely accessible. For example, anyone can register to become a juror in iCourthouse.¹⁸

D: Drawbacks of online opinion polls

The online opinion polls have seven limitations, which we consider as drawbacks. The limitations are described below.

- (1) Because online opinion polls allow anyone to participate in the dispute resolution procedure and do not charge any fee, they are often full of trivial and often silly claims (Marder, 2006, p. 245).
- (2) Because online opinion polls do not verify the identity of the voters, the plaintiff and the defendant do not have any knowledge about who is participating and cannot be sure that the poll is representative (Marder, 2006, p. 246). For instance, a single person can make numerous registrations and may influence the outcome of the decision. This problem can be resolved by allowing the system to verify that each vote is made by a different person. However, it may decrease the attractiveness of the procedure because certain users would prefer not to disclose their identity when participating in online opinion polls.
- (3) A major drawback of some online opinion polls, such as iCourthouse and SideTaker, is that every juror is introduced to the case by viewing the responses of the other jurors. It puts impartiality of such a procedure in doubt (Marder, 2006, p. 247). The reason of the doubt is that showing the responses of the other jurors often lead to informational cybercascade. The concept of informational cybercascade was introduced by Sunstein (2009). According to him, in an informational cybercascade, people cease relying, at a certain point, on their private information or opinions. They decide on the basis of the signals conveyed by others. Consequently, the behaviour of the first few people can, in theory, produce similar behaviour from a large number of followers (Sunstein, 2009, pp. 83-86).
- (4) At least in iCourthouse, it is unclear at what point the vote becomes final, how many votes are necessary for a “win” (Marder, 2006, p. 248). While the parties can agree amongst them what proportion of the verdicts will constitute a decision, iCourthouse neither aggregates the votes nor renders a decision. After a check in iCourthouse, it has been established that one can still become a jury member in a case from 2003.¹⁹

18 iCourthouse’s User Agreement does not require the users of iCourthouse to meet certain requirements in order to use iCourthouse. See iCourthouse’s User Agreement available at http://www.i-courthouse.com/main.taf?area1_id=front&area2_id=useragreement (last visited Jan. 3, 2017).

19 See Case No 2003-10954 in the iCourthouse.

- (5) Because anyone can post a claim on the online opinion polls, online opinion polls may be used by anonymous users for defamation of people. In some cases, the victims of defamation may not be able to remove the defamatory content because the providers of the online opinion polls may not be legally obliged to remove defamatory content. For example, Section 230(c)(1) of the US Communications Decency Act of 1996 provides immunity from liability for providers and users of websites which publish information provided by others.²⁰ Therefore, the providers of the online opinion polls based in the United States are not obliged to investigate and remove any defamatory content.
- (6) Since online opinion polls allow the participation of anonymous users, participants in such procedures may abuse, harass, and bully other participants, without allowing the latter to identify and bring to justice the former. This may have a negative impact on the subjective procedural fairness of online opinion polls as this type of fairness may vary depending on the extent the procedures conform to personal ethical standards (Lind and Tyler, 1988, p. 132).²¹
- (7) The anonymity of the members of the crowd participating in online opinion polls decreases their transparency. This, in turn, can have a negative impact on the objective and subjective procedural fairness of such procedures because transparency affects these two types of fairness.²²

3.2 ONLINE MOCK JURY SYSTEMS

Online mock jury systems are used by lawyers who have actual cases to gain insight into how prospective jurors view those cases.²³ Traditionally, only the lawyers dealing with big cases use offline mock juries or the so-called “focus groups” because the price of such juries is huge. However, with the appearance of the Internet, even lawyers dealing with low monetary value cases can test their case before an online mock jury (Marder, 2006, p. 249).

20 See the Communications Decency Act of 1996 available at <http://transition.fcc.gov/Reports/tcom1996.txt> (last visited Jan. 3, 2017).

21 For more information on the relationship between ethicality of dispute resolution procedures and perceptions of procedural fairness, see Subsection 5.2.6.

22 For more information on the relation between transparency and objective procedural fairness, see 5.1.4. For more information on the relation between transparency and subjective procedural fairness, see 5.2.

23 Online mock jury systems differ from online jury systems because the former are used mainly by lawyers who would like to test actual cases, whereas the latter are used mainly by disputants who attempt to facilitate the resolution of their disputes. More specifically, the members of the crowd participating in online opinion polls facilitate the resolution of disputes in two ways. First, the members of the crowd provide the disputants with suggestions on how to resolve their disputes. Second, the members of the crowd participating in online opinion polls serve as a container for any escalating conflict (cf. Ury, 2000, p. 7). According to Ury, in the absence of such a container, serious conflict between two parties may easily turn into a destructive conflict (Ury, 2000, p. 7).

In the typical online mock jury systems, such as eJury²⁴ and Virtual Jury²⁵, the lawyers submit summarised versions of their cases to online juries. In particular, they submit a factual summary of the case, including claims and possible defences, exhibits, and jury instructions. After the submissions are made by the lawyers, the providers of the online mock juries, taking into account the demographics of the potential jury members, select juries from a special list of jury members. The online mock jury systems generate a vast amount of data which can be used to find strengths and weaknesses in evidence, establish a settlement value, learn “public” attitudes, discover the most effective arguments, and improve jury selection (Starr and McCormick, 2009, pp. 5-6).

Below, we examine (A) eJury as an example of the online mock jury system. Then, for comparison, we will provide brief descriptions of (B) three more online mock jury systems. Subsequently, we discuss (C) the benefits of online mock jury systems, and (D) the drawbacks of online mock jury systems.

A: *eJury*

eJury (www.ejury.com, last visited Jan. 3, 2017) provides attorneys with the opportunity to learn what jurors may think about their cases.²⁶ eJury functions similarly to a traditional mock jury with the exception that the jurors participate via the Internet. Because jurors participate remotely, attorneys can test their cases at a cost, which is lower than the cost of traditional jurors. According to the founder of eJury, some attorneys post their cases to as many as 500 mock jurors (cf. Rutkin, 2015). Attorneys can use the large amount of data to see how the jury verdicts differ according to the jurors’ race, gender, or age (Rutkin, 2015). A screenshot of eJury is given in Figure 6. The information given is self-explanatory. Below, we describe the eJury process.



Figure 6. A screenshot of eJury

24 <http://www.ejury.com/> (last visited Jan. 3, 2017).

25 <http://virtualjury.com/> (last visited Jan. 3, 2017).

26 It should be noted that the jurors participating in eJury should not be confused with traditional jurors. The former provide attorneys who test their cases with feedback which can be used by the attorneys to evaluate the strength and weakness of their cases, whereas the latter determine facts in litigation proceedings.

An eJury process consists of three stages, namely, (1) preparation, (2) notification, and (3) submission of verdicts. These three stages are briefly described below.

Ad (1) Preparation

In the preparation stage, the attorney prepares a case which consists of (a) facts from the perspectives of each party, (b) jury questions which would be used at trial, and (c) personal questions to the jurors.

Ad (2) Notification

In the notification stage, eJury publishes the attorney's case into a secure section on its website where only eJurors in the geographical area of selection can access the case. Subsequently, the eJurors in that area are notified electronically that a new case has been published.

Ad (3) Submission of verdicts

In the submission of verdicts stage, the eJurors review the facts and answer the questions. Thereafter, they submit their verdicts. Once the minimum number of verdicts has been rendered (typically fifty), eJury automatically closes the case. The verdicts are summarised and printed. The final report includes statistics of the damages awarded by the jurors as well as the fifty (or more) verdicts containing the demographic profile of each participating eJuror.

The procedure offered by eJury meets the three elements of our definition of CODR. Concerning the first element (ADR or court proceedings), it has been already pointed out that ADR procedures do not need actually to resolve disputes. ADR procedures may simply provide one of the parties with the opportunity to test its case in front of mock juries (Statsky, 2008, p. 422). This form of ADR procedures is called summary jury trial, also known as mock trial or a minitrial (Statsky, 2008, p. 422). The jury in a summary jury trial "deliberates and renders a non-binding advisory verdict" (Statsky, 2008, p. 422). The parties may use the information collected through a summary jury trial in order to know the Best Alternative to a Negotiated Agreement (BATNA). Knowing the BATNA is an important step for the success of negotiation (Lodder and Zeleznikow, 2010, pp. 41-43). Consequently, being a form of ADR, eJury meets the first element of our definition of CODR.

Pertaining to the second element (using the Internet), it should be noted that the summary jury trial procedure provided by eJury is conducted entirely online. eJury converts the case submitted by the parties into a webpage and makes it accessible only to eJurors in the county of selection.²⁷ Afterwards, the eJurors in that county are then notified by email that a new case has been posted. Therefore, eJury meets the second requirement for qualifying as a CODR procedure.

27 See the webpage entitled "Learn about eJury and eJurors" available at http://www.ejury.com/jurors_learn_about.html (last visited Jan. 3, 2017).

As for the third element (using crowdsourcing), we need to examine whether the summary jury trial procedure provided by eJury falls within the scope of the definition of crowdsourcing provided by Howe (2006). The jurors in the summary jury trial procedures usually come from the regular pool of jurors in the county (Statsky, 2008, p. 422). In most U.S. States, the jury pool is drawn from lists of registered voters (Smith and Cole, 2007, p. 247). The eJury outsources the function once performed by regular juries and outsources it to an undefined (and generally large) network of people in the form of an open call. The network is undefined (and generally large) because any Internet user residing in the county of selection can become a juror in eJury. Because (1) any Internet user complying with certain requirements can participate in the summary jury trial procedure and (2) the call is made publicly available on the website of eJury, the call used by eJury to outsource the function of a regular juror falls within the scope of our definition of “open call”.

Juror Sign Up

We're glad to see you are interested in becoming an "eJuror."

There are **no charges or costs** for signing up to be an eJuror. There is also **no guarantee** that there will be cases for you to complete once you sign up. Cases are assigned based upon availability from attorneys, where you live (your residence), and your demographic details.

Qualifications:

Just like actual jury service in the United States, to qualify as an eJuror, you must:

- be at least 18 years of age;
- be a citizen of the United States;
- be of sound mind and good moral character;
- be able to read and write;
- have never been convicted of a felony; and
- not be under indictment or other legal accusation of misdemeanor theft or felony theft or any felony charge.

In addition, due to the confidential nature of our cases, you must:

- **not** be an actively practicing attorney, paralegal, or legal assistant;
- **not** be employed by or associated with an attorney or law firm;
- **not** be related to a practicing attorney within the first degree of affinity (marriage) or within second degree of consanguinity (blood); and
- **not** be employed as an insurance adjuster, nor associated with the adjusting of liability claims.

We encourage everyone to read our [Learn About page](#) and [Terms & Conditions](#) before signing up.

[I'm Ready to Sign Up Now!](#)

Figure 7. A notice of open call published by eJury

Figure 7 displays the notice of open call published by eJury. The notice informs any potential jurors that: (1) there are no charges or costs for signing up to be an eJuror; (2) there is no guarantee that there will be cases for the jurors; (3) they need to meet certain requirements in order to become jurors; and (4) they need to read two documents (a “Learn About” page and a Terms and Conditions statement) before signing up as jurors. Complying with the three elements of our definition of CODR, eJury qualifies as a CODR procedure.

B: Three more examples of online mock jury systems

Below, we briefly discuss three additional examples of online mock jury systems, namely, (B1) JuryTest, (B2) OnlineVerdict, and (B3) TrialJuries.

B1: JuryTest (www.jurytest.net)

Jurytest.net allows an attorney to record a case summary or argument on a toll-free telephone line, 1.888.JURYTEST. Then, a geographically selected group of “jurors” listens to the recording and reviews the exhibits attached to the case. Attorneys can read the feedback of the jurors on a secure section of the JuryTest website.²⁸ The feedback can help attorneys to choose the correct trial strategies. For example, a large insurance firm used the services of JuryTest in order to find out whether, according to JuryTest jurors, flood damage caused by the Hurricane Katrina will fall within the scope of insurance policies covering wind-only damage.²⁹ Since the jurors answered positively, the insurance firm decided not to base its defence on the difference between flood and wind damage.³⁰

The procedure offered by JuryTest falls within the scope of our definition of CODR. Below, we provide reasons to support this statement.

Concerning the first element (ADR or court proceedings), JuryTest provides a summary jury trial procedure similar to eJury. Therefore, JuryTest meets the first element of our definition of CODR.

As for the second element (using the Internet), it should be noted that, while the lawyers of the parties may submit the summons to the jurors by calling on a toll-free telephone, the jurors may review the summons and provide their opinion through the Internet only.³¹ Therefore, the summary jury trial procedure meets the second element of the definition of CODR.

In relation to the third element (using crowdsourcing), eJury outsources the function once performed by regular juries and outsources it to an undefined (and generally large) network of people in the form of an open call. The network is undefined (and generally large) because any Internet user complying with certain requirements can become a juror in JuryTest.³² Because (1) any internet user complying with certain requirements can participate in the summary jury trial procedure and (2) the call is made publicly available on the website of eJury, the call used by eJury to outsource the function of a regular juror falls within the scope of our definition of “open call”. Figure 8 displays the notice of open call published by JuryTest.

The notice of open call published by JuryTest informs the jurors of the three steps related to their participation in JuryTest. The first step is the reviewing of cases published by lawyers. The second step is the provision of feedback on each case. The third step is receiving a payment for their contribution to JuryTest.

28 See <https://www.jurytest.net/index.cfm?action=aboutus> (last visited Jan. 3, 2017).

29 See <https://www.jurytest.net/index.cfm?action=stories> (last visited Jan. 3, 2017).

30 See <https://www.jurytest.net/index.cfm?action=stories> (last visited Jan. 3, 2017).

31 See <http://www.jurytest.net/index.cfm?action=howjur> (last visited Jan. 3, 2017).

32 In order to register as jurors at JuryTest, the jurors must attest to the fact that they are not lawyers or insurance company representatives. Further, they must agree that they are participating as consultants to the lawyers who will utilise the services offered by JuryTest and will not disclose the names of any parties on cases that they review. See <http://www.juryTest.net/index.cfm?action=signupjur> (last visited Jan. 3, 2017).

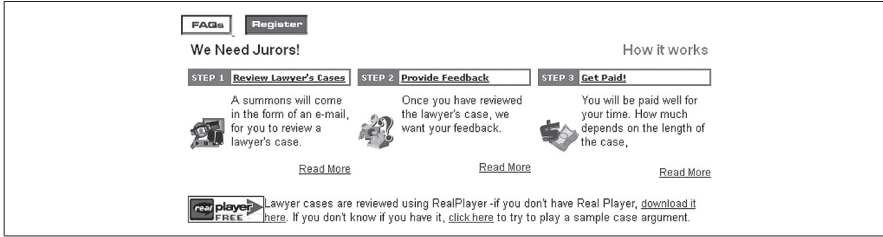


Figure 8. A notice of open call published by JuryTest

B2: OnlineVerdict (<http://www.onlineverdict.com>)

OnlineVerdict allows attorneys to post a case summary on the website through a password-protected account. The case summaries relate to civil, criminal, and patent disputes (cf. Rutkin, 2015). A case summary includes up to 5 double-spaced pages for each side and two graphic images or exhibits for each side. The attorney posting the case can choose to receive feedback from 25 to 50 jurors. All jurors are pre-screened to ensure that they do not have any conflicts with the parties. The feedback provided to the attorneys testing their cases include (1) statistically compiled results of all juror responses to questions on the verdict and the case as well as (2) detailed demographic information about each juror including age, gender, ethnicity, education, marital status, occupation, household income, and political party affiliation.³³ An excerpt of a verdict published by OnlineVerdict is given in Figure 9.

The excerpt shows three questions and the answers of the jurors to those questions. The first question is "Do you find that the Defendant, Dairy Products, Inc., was negligent in hiring Defendant, Gary Clausen, as a driver?" 76% of the jurors voted "yes" to this question, whereas the remaining 24% voted "no". The second question is "Was the negligence of Defendant, Dairy Products, Inc., a substantial factor in bringing about Plaintiff's harm?" Similarly to the first question, 76% of the jurors voted "yes" and 24% voted "no". The third question is "State the amount of damages, if any, sustained by Plaintiff as a result of the occurrence, for the following damages: Pain and suffering by Joseph Smith, Lost earning capacity of Joseph Smith, Loss of consortium for Marie Smith".

The mean damages voted by jurors for the "Pain and suffering by Joseph Smith" amount to USD 32,200, whereas the median damages for the pain and suffering by the same person amount to USD 25,000. The mean damages voted for the loss of earning capacity of Joseph Smith amount to USD 608,000. The median damages for the loss of earning capacity by the same person amount to USD 500,000. The mean damages for the loss of consortium for Marie Smith amount to USD 33,000. The median damages for the same loss of consortium amount to USD 10,000.

33 See <http://onlineverdict.com/attorneyshowitworks.php> (last visited Jan. 3, 2017).

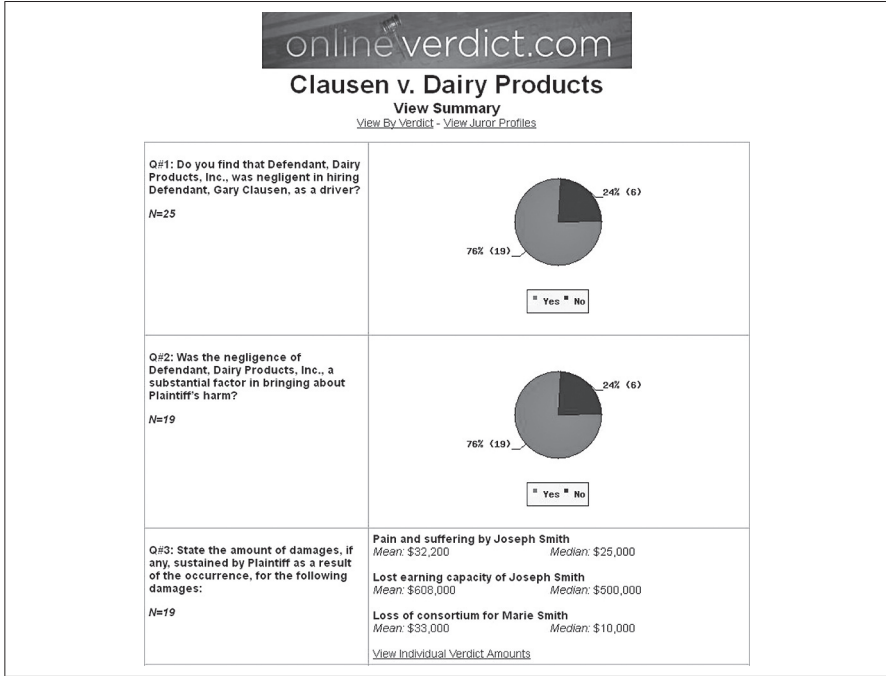


Figure 9. An excerpt of a verdict published by OnlineVerdict.com

The procedure provided by OnlineVerdict falls within the scope of our definition of CODR. Below, we give reasons to support this statement.

With regard to the first element (ADR or court proceedings), OnlineVerdict provides a summary jury trial procedure similar to eJury. Therefore, JuryTest meets the first element of our definition of CODR.

In connection with the second element (using the Internet), it should be noted that lawyers willing to test their cases may submit the summons only by using the website of OnlineVerdict.³⁴ The jurors can also review the summons only by accessing the website of OnlineVerdict.³⁵ Therefore, the summary jury trial procedure offered by OnlineVerdict meets the second element of our definition of CODR.

Pertaining to the third element (using crowdsourcing), OnlineVerdict outsources the function once performed by regular juries and outsources it to an undefined (and generally large) network of people in the form of an open call. The network is undefined (and generally large) because any Internet user complying with the Terms of Use and the Privacy Policy of Online

34 See a webpage entitled "How it works" published on <https://www.onlineverdict.com/attorneys/attorney-how-it-works/> (last visited Jan. 3, 2017).

35 See a webpage entitled "How it works" published on <https://www.onlineverdict.com/attorneys/attorney-how-it-works/> (last visited Jan. 3, 2017).

Verdict can become a juror in OnlineVerdict.³⁶ Because (1) any Internet user complying with certain requirements can participate in the summary jury trial procedure and (2) the call is made publicly available on the website of OnlineVerdict, the call used by OnlineVerdict to outsource the function of a regular juror falls within the scope of our definition of “open call”.

B3: TrialJuries (<http://trialjuries.com>)

TrialJuries is an entirely web-based “mock jury” system. TrialJuries allows attorneys to log onto the website and submit a case. The submission can be in the form of a text, audio, or video file.³⁷ After the submission, the case is sent to a panel of jurors for review. The jurors are selected through an open call. There are three requirements for being a TrialJuries juror, namely, (1) the jurors should be at least 18 years of age, (2) the jurors should be United States citizens, and (3) the jurors should not have been convicted of a felony. The jurors review the case and render a verdict. The verdict is sent to the attorneys by email. A screenshot of TrialJuries is given in Figure 10. The screenshot indicates the three steps of operation of TrialJuries, namely, (1) presenting the case to the jury, (2) asking questions to the jurors, and (3) receiving the results of the jury vote.

The procedure provided by TrialJuries falls within the scope of our definition of CODR. Concerning the first element (ADR or court proceedings), TrialJuries provides a summary jury trial procedure similar to eJury and OnlineVerdict. Therefore, JuryTest meets the first element of our definition of CODR.

As for the second element (using the Internet), it should be noted that the procedure provided by TrialJuries is entirely web-based.³⁸ Therefore, the procedure meets the second element of the definition of CODR.

In relation to the third element (using crowdsourcing), TrialJuries outsources the function once performed by regular juries and outsources it to an undefined (and generally large) network of people in the form of an open call. The network is undefined (and generally large) because any Internet user meeting the aforementioned requirements can become a juror in TrialJuries.³⁹ Since (1) any Internet user complying with the requirements can participate in the summary jury trial procedure and (2) the call is made publicly available on the website of TrialJuries, the call used by TrialJuries to

36 The Terms of Use of OnlineVerdict is available on <https://www.onlineverdict.com/terms-conditions/>. The Privacy Policy of OnlineVerdict is available at <https://www.onlineverdict.com/privacy-policy> (last visited Jan. 3, 2017).

37 See a webpage entitled “Our Pricing Options” published on <https://www.tlextranet.com/trialjuries/thecost.html> (last visited Apr. 4, 2016).

38 See a webpage “How it works” available at <http://trialjuries.com/trialjuries/howit-works.html> (last visited Jan. 3, 2017).

39 The Terms of Use of OnlineVerdict is available on <https://www.onlineverdict.com/terms-conditions/> (last visited Jan. 3, 2017). The Privacy Policy of OnlineVerdict is available on <https://www.onlineverdict.com/privacy-policy/> (last visited Jan. 3, 2017).

outsource the function of a regular juror falls within the scope of our definition of “open call”.

Prepare your Case

TrialJuries is an affordable and intuitive way to test-drive your case in front of real people from your venue. See how they respond to your facts and theories so you can:

- Better prepare for trial
- Identify the ideal jury composition
- Evaluate your case for settlement

1 PRESENT THE CASE
Present both sides of your case to the jury. You can submit a written statement of the case, or make an audio or video presentation. Include exhibits and "instruct the jury" just as you would at trial.

2 ASK YOUR QUESTIONS
Prepare questions for the jury to answer. Ask "Verdict Questions" like the ones you plan to submit at trial and "Feedback Questions" to get juror's impressions and reactions to your case.

3 SEE THE RESULTS
Our detailed reports break down each juror's answers to your questions and let you analyze these responses across a broad range of demographic information about each juror.

Figure 10. A screenshot of TrialJuries

C: Benefits of online mock jury systems

Below, we describe four benefits that online mock juries provide to the lawyers who use them.

The online mock juries offer four benefits for the attorneys who will use them to test their cases (see Marder, 2006, pp. 249-251). In particular, the online mock juries are quick, inexpensive, convenient, and provide important feedback to lawyers.

- (1) **Quick.** Because online mock jury systems do not require jurors to travel to offline premises, such systems can collect feedback from jurors quicker than offline mock juries. For example, according to OnlineVerdict, feedback from 25 to 50 jurors can be gathered within a few days, compared to several weeks for an offline mock jury.⁴⁰
- (2) **Inexpensive.** According to OnlineVerdict, traditional face-to-face offline mock juries cost between USD 20,000 and USD 50,000. The costs include recruiting of jurors, participant pay, facility rental, audio-visual support, and catering. Because the providers of online mock jury systems do not have to pay for the facilities rental, catering, and transport, they can offer their services at a lower price compared to the price of the offline mock jurors. For example, attorneys willing to use the services of OnlineVerdict have to pay USD 2000 for receiving a feedback from 25 jurors.⁴¹
- (3) **Convenient.** The online mock juries provide lawyers with the convenience to post their cases from their own computer at a time convenient to them. In comparison, lawyers using offline mock juries should attend physical premises in which the mock cases will be presented.

40 See <http://onlineverdict.com/attorneys.php> (last visited Jan. 3, 2017).

41 <http://onlineverdict.com/attorneys.php> (last visited Jan. 3, 2017).

- (4) Provide important feedback to lawyers.⁴² The feedback can be used to determine the case value, develop the case themes, find the facts to emphasize, and learn the “public” attitudes.

D: Drawbacks of online mock jury systems

The online mock juries have three drawbacks, which affect lawyers who would like to present their cases, namely, (1) lack of deliberations, (2) lack of face-to-face communication, and (3) deciding cases on the basis of the feedback provided by only one of the parties.

D1: Online mock juries lack deliberations (cf. Marder, 2006, pp. 254-256). In comparison to the offline mock juries, online mock juries do not require jurors to deliberate the cases presented to them. The jury deliberations are the most informative part of the offline mock trial. By observing deliberations, an attorney familiar with the case can learn which issues or questions need to be thoroughly addressed. Later, the attorney can make sure that those questions are answered in the case presentation for the real trial. In addition to raising questions, jurors may show images, metaphors, analogies, and themes that help the attorneys to prepare for the real trial (cf. King, 2008, p. 52).

A common belief is that jury deliberation is a reliable way of establishing the truth in a contentious matter (cf. Kapardis, 2010, p. 180). The reason is that the deliberation encourages the correction of mistaken conclusions, because it provides a juror with the opportunity to take into account different opinions that may be more plausible than the opinion of the juror before participating in the deliberations. However, a study conducted by Schkade, Sunstein, and Kahneman (1999) found that deliberating juries did not produce less erratic and more predictable judgements than decisions taken by individuals without deliberation. In contrast, Schkade, Sunstein, and Kahneman (1999) found that a key effect of deliberation is a polarisation of individual judgements. Group polarisation is the tendency for individual’s opinions to become more extreme (in whatever direction they originally favoured) after discussion than before (see also Moscovici and Zavalonni, 1969; Lindzey, Gilbert, Fiske, 2003, p. 439). The reason for the group polarisation is that, during deliberation, the members of the group often follow the opinions of other members of the group.

Consequently, we may conclude that both the lack of jury deliberations and the presence of jury deliberations have negative sides. The lack of jury deliberations does not allow the jurors to see the mistakes in their conclu-

42 It should be noted that online mock juries provide more feedback to lawyers than traditional juries. This is because usually they take into account the opinions of more jurors. For instance, at eJury each case is submitted to a minimum of 50 people. See http://www.ejury.com/jurors_learn_about.html#how (last visited Jan. 3, 2017). The number of traditional mock jurors is occasionally the same as the court jurors. The number of jurors varies in every country but is rarely more than 12 persons. See <http://en.wikipedia.org/wiki/Jury#Composition> (last visited Jan. 3, 2017).

sions. The presence of jury deliberations may lead to judgements that are not based on rational assessments of the facts, but on the basis of the opinion of others. The designers of CODR platforms are advised to create their platforms in such a way so as to ensure that people are exposed to reasonable alternatives and not to the echoes of their own opinions.

D2: Since there is not a mock trial taking place in a room emulating a court room, the attorney cannot present his case in the same manner in which he will be able to present it in an offline mock court (cf. Marder, 2006, p. 258).⁴³ Moreover, the real juries evaluate the presentations of attorneys and witnesses not only on the basis of the verbal communication, but also on the basis of non-verbal communication, such as appearance, general demeanour, voice pitch, response style (cf. Posey and Wrightsman, 2005, p. 40). Missing the element of non-verbal communication is a severe drawback. However this drawback can be overcome by using the modern technology for online video transfer. In this regard, it should be noted that the technologies for face recognition carefully develop at a fast pace (Li and Jain, 2011; Postma, 2014). The face recognition technologies may allow attorneys to analyse the non-verbal communication of participants in mock jury proceedings. Facial expressions play an important role in non-verbal communication. People use facial gestures to convey their moods and express their feelings (King and Li, 1999, p. 399).

D3: Online mock juries are designed in such a way as to allow one of the parties in a dispute to test its case. Thus, online mock juries do not allow the other party to: (1) present evidence and law; and (2) affect the outcome of the dispute resolution process. This may have a negative impact on the compliance of online mock juries with elements of both subjective and objective procedural fairness.⁴⁴

3.3 ARBITRATION TRIBUNALS RENDERING SELF-ENFORCEABLE DECISIONS

In this section, we discuss CODR procedures functioning as arbitration tribunals that deliver self-enforceable decisions. In the context of CODR, the term “self-enforceable decision” means that the decision is enforced by the

⁴³ It should be noted that this problem can be solved to some extent by using virtual worlds.

⁴⁴ For example, online mock juries may not comply with the element of subjective procedural fairness called process control. It relates to disputants’ control over the development and selection of information that will constitute the basis for making a decision (see Thibaut and Walker, 1975). Also, online mock juries may not comply with fair hearing, an element of both subjective and objective procedural fairness. Fair hearing refers to the opportunity of each party to present evidence and law (Hörnle, 2009, p. 13). For more information on process control, see Subsection 5.2.1. For more information on fair hearing, see Subsection 5.1.5 and Section 5.2.

organisation providing the procedure, not by the coercive power of a state.⁴⁵ Below, we discuss (A) the eBay's Community Review Forum (ECRF), which is a typical example of a CODR procedure functioning as arbitration tribunal that used to render self-enforceable decisions but has now been discontinued. Afterwards, we examine Marktplaats Gebruikersjury, a CODR procedure, which is continuation of the ECRF. Finally, (C) the benefits and (D) the drawbacks of CODR procedures functioning as arbitration tribunals rendering self-enforceable decisions are given.

A: eBay's Community Review Forum

In 2008, eBay launched the ECRF, a website offering a CODR procedure of which the decisions were enforced by a private authority (eBay). ECRF transformed in reality the futuristic idea that a dispute can be effectively resolved at no cost by a large group of people located in many different countries in less than twenty two days after submitting the claim (cf. Van den Herik and Dimov, 2011a, p. 247). Below, we give a brief description of the ECRF and its operation. Many details will be discussed later. The current description also serves as an introduction to the concept of CODR and the operation of the ECRF.

The ECRF allowed any seller to appeal non-positive feedback given by a buyer which the seller believed to be unfair or unjustified. The appealed feedback consists of a rating of the transaction along with a short comment by the buyer. For example, a buyer may leave a negative feedback if (1) the seller does not ship the item or (2) the item does not match the description. Then, the seller was given an opportunity to file a claim against the feedback. If a seller's claim against the feedback was successful, eBay was obliged to remove the disputed feedback otherwise the feedback would become publicly visible at the website of eBay. The claims by the sellers were judged by 21 randomly selected members of the eBay's Community. The 21 jurors were selected from a large group of candidates who had expressed their willingness to participate in the ECRF through an open call procedure. We take an example of a candidate juror from eBay India.

A seller using eBay India was allowed to participate in the open call if he met cumulatively the following conditions: (1) the user should be registered on eBay India for six months; (2) the seller should have 20 feedback scores as a seller with an overall rating of 97% positive feedback; (3) the seller should have completed at least one transaction on eBay as a buyer and one as a seller. A buyer was allowed to participate in the open call if he met cumulatively the following conditions: (1) the buyer should be registered on eBay India for six months; (2) the buyer should have 10 feedback scores

45 Arbitration tribunals rendering self-enforceable decisions have a particular importance in the field of CODR because they are the only CODR procedures rendering decisions that can be imposed on a disputant, without his consent. The solutions proposed by all other CODR procedures can become binding on a disputant only if the disputant agrees to be bound by them.

with overall rating of 97%; and (3) the buyer should have completed at least 10 buyer transactions. These conditions were set in order to ensure that only trustworthy and experienced eBay users served as jurors.

The information to be sent to the jury by the claimant included: dates of bidding, buying and paying; dates of receiving an item; a proof of paid and received items; information about the condition of the item that was sent; and other information intended for supporting the case. The claimant was asked to write a statement of up to 5000 characters, and to include up to 3 photos to support his statement.

After the seller had submitted a claim to appeal the feedback, the buyer was emailed so that he knew what he should do next. Ten days were given to the buyer from the time when the appeal was written and received by the jury to write his statement in response. If he chose not to justify his feedback within 10 days, the case would automatically progress to the jury voting stage where the jury would vote based on the claimant's feedback and photos. However, if the buyer chose to justify his feedback, he needed to review the statement and the photos that the seller had put together as his appeal. The buyer could write a statement of up to 5,000 characters explaining why he believed his feedback was justified and why the seller's appeal was not justified as such. He could also upload up to three additional photos to support his case.

After the buyer submitted his written statement and up to three additional photos, the seller had two days to review the buyer's statement and to write a brief final response.

Subsequently, the case was put active and was served to the randomly allocated 21 jury members to vote upon. In order to be informed about the status of the case, the claimant and the respondent were emailed. They could also log into the ECRF at any time to see the status of the case.

As regards the jury, anonymity of jurors was maintained and any attempt to trace and contact a juror led to being barred from using the ECRF. Also, the jury was never pre-selected. When a jury member logged into the ECRF, he was randomly allocated to a case. Jury members would not be allocated to a case for at least one of the following two reasons: (1) if they had had a transaction with either the buyer or the seller; (2) if they had once voted on a case in which the buyer or the seller was/were already involved. At least 11 out of the 21 jury members must agree that the feedback should be removed in order for it to be removed. If the first 11 people opined that the feedback should be removed, the case was closed at that point and the feedback was removed. If the first 11 people voted not to remove the feedback, the case was also closed and the feedback was not removed.

The final decision of the jury was enforced by an eBay Customer Service Representative, who, if appropriate, removed the feedback. A screenshot of eBay's Community Court (an early version of the ECRF) is given in Figure 11.

The screenshot of the eBay's Community Court demonstrates the four steps of operation of the eBay's Community Court, namely, (1) starting the appeal of feedback posted in eBay, (2) collecting the view of the person who

posted the appealed feedback, (3) jury voting, and (4) rendering the final decision.

The procedure offered by the ECRF is a form of CODR because it falls within the scope of our definition of CODR.



Figure 11. A screenshot of the eBay's Community Court (an early version of the ECRF)

As regards to the first element (ADR or court proceedings), the ECRF provides a non-binding arbitration procedure. The non-binding arbitration is one of the most widely known forms of ADR (Paulsson, 1999, p. 108). The non-binding arbitration is more used in ODR than the legally binding arbitration (Harkiolakis and Halkias, 2016, p. 170). One of the reasons for the success of the non-binding arbitration is that such arbitration is not an object of “the stringent procedural requirements that prevail in binding arbitration” (Kaufmann-Kohler and Schultz, 2004, p. 33). Nevertheless, the non-binding arbitration may be more formal and lengthy than the early neutral evaluation (Murray, 2011, p. 158).

In order to find out whether the ECRF provides a non-binding arbitration procedure, we will examine whether the procedure offered by the ECRF falls within the scope of a definition of binding arbitration. If we find out that the only difference between the procedure offered by the ECRF and the binding arbitration procedures is the lack of a legally binding decision, then the procedure provided by the ECRF should be regarded as a non-binding arbitration.

The binding arbitration can be defined as a process in which one or both of the parties involved have agreed by contract to submit unresolved issues to a neutral third party of which the decision shall be final and binding on all parties involved (cf. Carrell and Heavrin, 2008, p. 180). In order to use the website of eBay, the disputants using the ECRF had to accept the User Agreement of eBay which allowed for the resolution of disputes through the ECRF. The procedure provided by the ECRF is initiated by one of the parties involved in a transaction concerning goods sold through eBay. The dispute was resolved through a group of neutral third parties. As it has been mentioned before, eBay imposed certain procedural safeguards in order to

ensure the impartiality of the parties. The decision rendered by eBay was final because the disputants were not able to appeal it before any institution. Hence, the only difference between the procedure offered by the ECRF and the binding arbitration is that the former does not result in legally binding decision. Being a form of non-binding arbitration, the ECRF qualifies as a form of ADR and, therefore, complies with the first element of our definition of CODR (ADR or court proceedings).

Pertaining to the second element (using the Internet), it should be noted that the procedure provided by the ECRF is conducted entirely online. Therefore, the procedure complies with the second element of our definition of CODR.

In relation to the third element (using crowdsourcing), the disputants in traditional arbitration appoint an arbitrator by concluding a contract known as Arbitrator's contract (Onyema, 2010, p. 86). The ECRF outsources the function once performed by appointed arbitrators and outsources it to an undefined (and generally large) network of people in the form of an open call. The network is undefined (and generally large) because any Internet user complying with the aforementioned requirements was able to become a juror in the ECRF. The call used by the ECRF to outsource the function of an arbitrator falls within the scope of our definition of "open call" because (1) any Internet user complying with the aforementioned requirements was able to participate in the ECRF and (2) the call was made publicly available on the website of the ECRF.

B: Marktplaats Gebruikersjury

Marktplaats.nl is an online action website providing a venue for buyers and sellers of products to meet and make transactions. It is owned by eBay (cf. Neysen, 2009, p. 17). Marktplaats Gebruikersjury is a CODR platform developed by eBay.⁴⁶ Colin Rule, the person who led the development of the ECRF, has contributed significantly to the creation of Marktplaats Gebruikersjury.⁴⁷

Marktplaats Gebruikersjury allows sellers of products on Marktplaats.nl to appeal negative feedback posted by buyers.⁴⁸ A seller may submit a complaint. It will be submitted to 11 jurors who will resolve the complaint. The jury is composed from randomly selected users who have expressed their interest to participate as jurors in Marktplaats Gebruikersjury.⁴⁹ If the complaint is accepted by the jury, Marktplaats' staff will report the disputed feedback from marktplaats.nl.

46 See <https://gebruikersjury-marktplaats.modria.com/mp/jsp/ccHome.jsp> (last visited Jan. 3, 2017).

47 See the official profile of Colin Rule at the website of the Consensus Building Institute. Available at <http://www.cbuilding.org/about/bio/colin-rule> (last visited Jan. 3, 2017).

48 The Dutch word *gebruikersjury* can be translated in English as the jury of the users.

49 See *Algemene Voorwaarden Marktplaats Gebruikersjury* (Terms and Conditions of Marktplaats Gebruikersjury). Available at <https://gebruikersjury-marktplaats.modria.com/mp/jsp/TermsAndConditions.jsp> (last visited Jan. 3, 2017).

The procedure offered by Marktplaats Gebruikersjury is a form of CODR because it falls within the scope of our definition of CODR.

Marktplaats Gebruikersjury meets the first element (ADR or court proceedings) because it is an online non-legally binding arbitration procedure organised by a private company (i.e., eBay). As discussed in Subsection 2.2.1, online arbitration is form of ADR.

Marktplaats Gebruikersjury meets the second element (using the Internet) because the procedure provided by it is conducted entirely online.

Marktplaats Gebruikersjury meets the third element (using crowdsourcing) because Marktplaats Gebruikersjury outsources the function once performed by appointed arbitrations and outsources it to an undefined (and generally) large network of people in the form of an open call. The network is undefined (and generally large) because any Internet user complying with the terms and conditions of Marktplaats Gebruikersjury is able to become a juror in Marktplaats Gebruikersjury.⁵⁰ The call used by Marktplaats Gebruikersjury to outsource the function of an arbitrator falls within the scope of our definition of “open call” because (1) any Internet user complying with the terms and conditions of Marktplaats Gebruikersjury is able to participate in Marktplaats Gebruikersjury and (2) the call is made publicly available on the website of the Marktplaats Gebruikersjury.⁵¹

Figure 12 displays a screenshot from Marktplaats.nl. We reproduce the Dutch version of the website which consists of four stages: (1) submitting a complaint; (2) hearing of both sides; (3) the voting procedure; and (4) announcing the binding verdict. In Figure 12, each stage is described by a Dutch phrase.

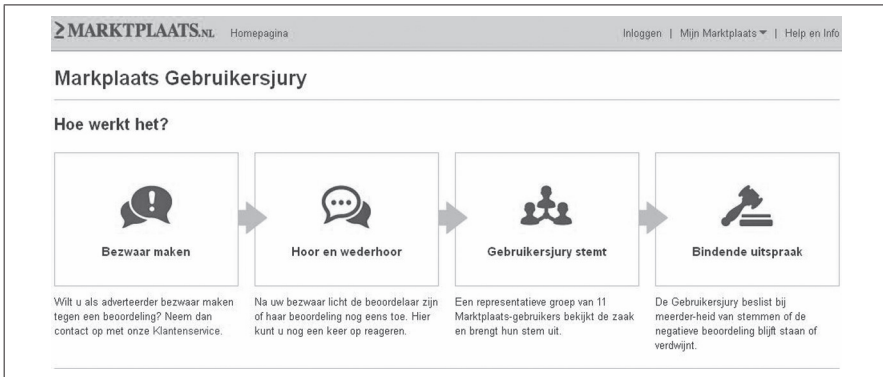


Figure 12. A screenshot of Marktplaats Gebruikersjury

50 Algemene Voorwaarden Marktplaats Gebruikersjury (Terms and Conditions of Marktplaats Gebruikersjury) are available at <https://gebruikersjury-marktplaats.modria.com/mp/jsp/TermsAndConditions.jsp> (last visited Jan. 3, 2017).

51 The webpage containing information about the open call for jury members is available at <https://gebruikersjury-marktplaats.modria.com/mp/jsp/login.jsp?ut=3> (last visited Jan. 3, 2017).

C: Benefits of CODR procedures functioning as arbitration tribunals rendering self-enforceable decisions

The CODR procedures functioning as arbitration tribunals rendering self-enforceable decisions offer two benefits to the disputants: (1) quick and (2) free.

- (1) Quick. For example, the maximum time of the ECRF procedure is not more than 22 days.⁵² In comparison, UDRP disputes are resolved through ODR in as little as 60 days of filing (see Partridge, 2012).
- (2) Free. The ECRF and Marktplaats Gebruikersjury allowed the disputants to resolve their disputes without paying any fee. In comparison, filing an UDRP complaint costs a minimum of EUR 500.⁵³

D: The drawback of CODR procedures functioning as arbitration tribunals rendering self-enforceable decisions

The CODR procedures functioning as arbitration tribunals rendering self-enforceable decisions have at least two drawbacks, namely, (1) lack of decision control and (2) possible procedural delays.

- (1) Lack of decision control. The term decision control refers to the extent to which the parties are free to reject or accept a decision rendered by a third party (cf. Wemmers, 1996, p. 69). Since the ECRF and Marktplaats Gebruikersjury decisions are directly enforced by an authorised officer, who, if appropriate, removes the disputed feedback, the disputants do not have any decision control. The lack of decision control is found to have a negative impact on subjective procedural fairness.⁵⁴

52 See Community Court's FAQs, <http://www.ebaycourt.com/cc/FAQ.jsf>. The archived webpage is available at <https://web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf> (last visited Jan. 3, 2017).

53 The fee for filling an UDRP complaint at the Czech Arbitration Court, one of ICANN's accredited UDRP providers, is 500 EUR for complaints involving no more than 5 domain names. However, if (1) the respondent replies or (2) the arbitrator finds that the case is complex the complainant should pay an additional fee of 500 EUR. See Annex A: Fee Schedule of CAC's UDRP Supplemental Rules of the Czech Arbitration Court available on https://udrp.adr.eu/arbitration_platform/udrp_supplemental_rules.php#9 (last visited Jan. 3, 2017). The other ICANN's accredited providers charge the following fees for resolving UDRP procedures. The fee for filling a complaint involving up to 5 domain names at the Arbitration and Mediation Center of the World Intellectual Property Organization (WIPO) is USD 1500. See <http://www.wipo.int/amc/en/domains/fees/index.html> (last visited Jan. 3, 2017). The fee for filling a complaint involving up to 5 domain names at the Asian Domain Name Dispute Resolution Center is USD 1300 for complaints involving up to 2 domain names. The fee for filling a complaint involving up to two domain names at the National Arbitration Forum is USD 1300. See <http://domains.adrforum.com/main.aspx?itemID=631&hideBar=False&navID=237&news=26> (last visited Jan. 3, 2017). The aforementioned fees are for resolution of UDRP disputes by a single panelist.

54 For more information about the relationship between decision control and subjective procedural fairness, see Subsection 5.2.2.

- (2) Possible procedural delays. The ECRF and Marktplaats Gebruikersjury cannot resolve disputes if there were not sufficient jurors. In case there were not sufficient jurors, the case would simply remain pending until the required number of jurors join the case. This may have a negative impact on the objective fairness of the ECRF and Marktplaats Gebruikersjury as procedural delays are regarded as unfair by laws and courts.⁵⁵ However, it should be noted that the ECRF received more than sufficient jury applications to support the case volume (cf. Rule and Nagarajan, 2010, p. 4). One solution to this “imaginative” problem is to provide remuneration to the jurors in case that no jurors would like to participate without remuneration. The remuneration can be gradually increased until the CODR platform finds a sufficient number of jurors. However, the remuneration may also incentivise the jurors to focus on the number of decisions rendered by them, and not on the quality of the decisions.

3.4 CHAPTER SUMMARY

By examining the past and present CODR procedures, we found that the first types of CODR procedures function as either online opinion polls or online mock juries. These kinds of CODR procedures do not provide the parties with an actual resolution of their cases. Instead, the online opinion polls provide the parties with recommendations on how to resolve their cases. The online mock juries allow attorneys to use the verdicts rendered by the online mock juries as an ADR tool, in which parties that are not inclined to negotiate may see how the merits of their respective cases stand.

The ECRF was created with the aim to be the first CODR procedure that provides temporary relief to the parties. The relief is only temporary because the enforced decision is not legally binding and may be challenged before a law court. In January 2013, the ECRF was closed down. However, we still may conclude that it was a groundbreaking experiment that convincingly shows that the idea of solving a dispute effectively and at no cost by a large group of people located in many different countries in less than 22 days after submitting the claim has become reality.

⁵⁵ For more information on the relation between procedural delays and objective procedural fairness, see Subsection 5.1.7.

In this chapter, we aim at constructing a framework for CODR. Such a framework will be composed of building blocks. To define the appropriate building blocks for a CODR framework is our first task. Then we will focus on the crowd and their incentives.

In our search for appropriate building blocks we may start to have a look at frameworks for ODR procedures. While a framework for ODR can be used to describe CODR, such a framework will not allow us to focus on the new concept used in CODR, the crowd. Clearly, the frameworks for ODR are designed to describe ODR processes where the third neutral party is composed from one or otherwise a few dispute resolution professionals (cf. Katsh and Rifkin, 2001, Junqueira and Costa, 2007, pp. 69-79). As a direct consequence, these frameworks are not focusing on important aspects of CODR, such as the composition of the crowd and the incentives motivating the third neutral party to participate in the procedure. Moreover, when using the ODR framework provided by Katsh and Rifkin (2001) for describing CODR, we mostly need to deal with filling in a complaint, notifying the respondent, reaching a decision, and enforcing the decision. The framework cannot be used in our research to investigate the two important aspects mentioned above. In summary, without investigating these two aspects, we will not be able to formulate an adequate CODR framework.

In the literature reviewed, we found a framework of collective intelligence systems described by Malone, Laubacher, and Dellarocas (2009) that seemed to possess some characteristics which possibly fit our framework. Therefore, we decided to have a close look at this framework. Inspired by their ideas, we will investigate the possible construction of a suitable framework for CODR. To facilitate reading we henceforth call the above-mentioned framework the Malone framework.

In Section 4.1, we describe the Malone framework. We end that section by four questions that guide the contents of the remaining sections. Thus, these sections will deal with the crowd (Section 4.2), the incentives (Section 4.3), two broad categories of disputes (Section 4.4), and the organisation structure and process (Section 4.5). Section 4.6 contains a chapter summary.

4.1 THE FOUR BUILDING BLOCKS OF THE MALONE FRAMEWORK

For the description of the three types of CODR procedures (online opinion polls, online mock juries, and arbitration tribunals rendering self-enforce-

able decisions; see Chapter 2), we will investigate the Malone framework since it is designed to describe collective intelligence systems.

Collective intelligence systems can be broadly defined as systems allowing “groups of individuals to do things collectively that seem intelligent” (cf. Malone et al., 2009, p. 1). Thus, collective intelligence systems include crowdsourcing systems (see Kneißl, 2014, p. 11; Quinn and Bederson, 2011). Obviously, both, crowdsourcing systems and collective intelligence systems, allow a group of individuals to do things collectively that seem intelligent (cf. Kneißl, 2014, p. 11). A telling example is Wikipedia. It is a crowdsourcing system allowing thousands of contributors from across the world to create collectively the world’s largest encyclopedia.¹ From now on, we distinguish between (1) crowdsourcing systems and (2) collective intelligent systems that are not crowdsourcing systems by calling the latter general collective intelligent systems.

There are two differences between crowdsourcing systems and general collective intelligence systems (cf. Kneißl, 2014, p. 11). The first difference is that in the general collective intelligence systems, no open calls need to be made.² For instance, the citizens of the virtual world Second Life have collectively created all objects of the virtual world, including buildings, plants, landscapes and even clothes and avatars, without any open call (see Cheng, 2013). The second difference is that in the general collective intelligence systems, no function needs to be outsourced by a company or institution (see Kneißl, 2014, p. 11).³ For example, Linden Research, Inc., the creator of Second Life does not outsource tasks to the citizens of Second Life. The citizens of Second Life create the objects in Second Life at their own initiative and own the intellectual property rights of their creations (cf. Cheng, 2013).

On the basis of the aforementioned observations, we may conclude that frameworks of collective intelligence systems, including the Malone framework, can be applied (possibly after some adaptation) to crowdsourcing systems, which encompass the three types of CODR procedures mentioned above (cf. Geiger, Rosemanm, and Felt, 2011, p. 1).

The Malone framework consists of four building blocks. The term “building blocks” refers to elements that are common to any collective intelligence system. Employing an analogy from biology, Malone et al. (2009) call these building blocks the “genes” of collective intelligence systems.

For their framework, Malone et al. (2009) examined nearly 250 examples of collective intelligence systems and developed a series of classification frameworks. The goal of these classification frameworks was to classify examples of collective intelligence into categories that were (1) mutually exclusive, (2) collectively exhaustive, and (3) easy to understand (cf. Malone

1 For a more detailed description of Wikipedia, see Chapter 1.

2 The open call is an element of the definition of crowdsourcing provided by Howe (2006).

3 The process of taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people is an element of the definition of crowdsourcing provided by Howe (2006).

et al., 2009, p. 19). To test the degree to which the frameworks meet the aforementioned goal, Malone et al. (2009, p. 19) presented them to seasoned managers, established researchers, students, and research assistants. These groups of people provided their comments and opinions concerning the frameworks. On the basis of the collected information, Malone et al. (2009) developed a framework in which the building blocks of collective intelligence systems have their place and are defined by function and use.

The Malone framework indicates that crowdsourcing is not merely a process that happens randomly, but a process that can be customised (cf. Shore, 2011, p. 136). The customisation of the crowdsourcing process allows companies to match the right crowdsourcing process to their specific organisational needs (cf. Erickson, Petrick, and Trauth, 2012).

The four building blocks of the Malone framework are as follows.

- (1) Staffing (the people participating in the system).
- (2) The incentives that motivate the people to participate in the system.
- (3) The goal that the system aims to achieve.
- (4) The organisational structure and process of the system.

In relation to the fourth building block, an adequate description of the organisational structure and the according process shows how the system works.

The four building blocks are classified by using two pairs of related questions. Pair 1 is focused on staff and incentives. Pair 2 is focused on the goal and how it is achieved. Alternatively we may say: people and their drivers (pair 1) versus results and procedures (pair 2). We will aim to design our own CODR framework (see Sections 4.2 to 4.5) based on the example by Malone et al. (2009). The Malone framework in itself is too general. We believe that a framework adapted to CODR procedures will facilitate the analysis of CODR procedures more adequately. In many cases it is not necessary to adapt and clarify the concepts of the framework when analysing CODR procedures. Still, if we use the Malone framework, we will have to clarify now and then the concepts and terms under investigation. For example, the term staffing in the context of CODR refers to (a) the developers of the CODR platform, (b) the IT support personnel providing IT support to the users of the CODR platform, (c) the advertisers of the CODR platform, or (d) the crowd. This has to be made clear in the running context.

Let us now proceed with the identification of the four building blocks. According to Malone et al. (2009), the four building blocks can be identified by answering the following four questions. These four questions are provided below together with their answers (see Malone et al., 2009).

Question 1: *Who is performing the task?* The answer to the question “Who” is the crowd. Reliance on the crowd is a central feature of crowdsourcing systems (cf. Malone et al., 2009, p. 4).

Question 2: *Why are they doing it?* The answer of the question “Why” is in the incentives that encourage the members of the crowd to participate in crowdsourcing systems.

Question 3: *What is being accomplished?* The answer of the question “What” refers to the goals of the crowdsourcing systems.

Question 4: *How is it being done?* The answer of the question “How” refers to the organisational structure and processes of the crowdsourcing systems.

In order to identify the building blocks of CODR, we will need to adapt these questions to the context of CODR. The adapted questions are as follows.

- (1) Who does resolve the dispute in CODR?
- (2) Why does he do it?
- (3) What is the goal of CODR, i.e., what types of disputes can be resolved?
- (4) How does CODR work?

The answers to these questions constitute the building blocks of CODR. In our terminology, the answers read as follows.

- (1) the crowd (see Section 4.2);
- (2) the incentives (see Section 4.3);
- (3) the types of disputes (see Section 4.4);
- (4) the organisation structure and process (see Section 4.5).

In the following subsections, we will provide an elaboration of the answers.

4.2 THE CROWD

In this section, we provide a definition of the term crowd. We also clarify the term crowd by addressing the following four issues: type of entity of the crowd (4.2.1), diversity within the crowd (4.2.2), governance of the crowd (4.2.3), and temporality of the crowd (4.2.4).

Below, we provide a definition of the crowd constructed on the basis of Howe’s definition of crowdsourcing mentioned in Chapter 2.

Definition 4.1 (*The crowd*): *The crowd participating in CODR is a group of people who participate in the dispute resolution process through an open call.*⁴

We will use the aforementioned definition of the crowd for the purposes of this thesis. Although it does not describe the crowd in general, it is perfectly suitable in the context of CODR. Yet, in order to give the reader a somewhat better feeling and understanding of the notion of a crowd, we will examine the definitions of the crowd provided by O’Connell and Cuthbertson (2009, p. 148), Silva and Ramos (2012, p. 626), and Le Bon (2013).

O’Connell and Cuthbertson (2009, p. 148) describe the crowd as “a gathering of people who are in the same place (usually in public) and share a reason for being in that place.” A central point of this definition is that the

4 We note that the term open call has been already defined and clarified in Chapter 3.

crowd is not merely a gathering of people, but a gathering of people caused by a reason. In this regard, O'Connell and Cuthbertson (2009, p. 148) state that people who are at the beach on a hot summer day are not considered to be a crowd. However, if a company arrives at the beach on a hot summer day and starts distributing free bottles of sunscreen, the people going there to obtain a free bottle might be considered a crowd. A drawback of the definition provided by O'Connell and Cuthbertson (2009, p. 148) is that the criterion "sharing a reason for being in that place" cannot be used to distinguish clearly a crowd from a mere gathering of people. So, an argumentation for the crowd definition has to be subtle since every gathering of people is caused by a reason. In the example provided by O'Connell and Cuthbertson (2009, p. 148), the people who are at the beach on a hot summer day are on the beach for a specific reason, namely, the recreational effect of the sun, the wind, and the sea. All in all, this definition cannot be used in the context of CODR.

Silva and Ramos (2012, p. 626) define the crowd as "a large set of anonymous and heterogenous individuals, which may be composed of scientists and experts in various fields, but also of novices." A drawback of this definition is that the crowd is seen only as a combination of anonymous individuals. However, the social networks, the most popular applications of crowdsourcing, allow a large number of non-anonymous people to gather in groups based on interests. Below, we provide two examples of Facebook groups having a large number of members. First, the Facebook group "Quickly, Canadians against Proroguing Parliament (CAPP)" gathered over 200,000 members (cf. Kozolanka, 2014, p. 83). Some of them used the group to organise their participation in anti-prorogation protests in Canada. Second, the Facebook group called "Saving the Children of Africa" has over 1,2 million members (cf. Wolfsfeld, 2014, p. 19). The group collects donations for the children of Africa. The two examples show why this definition does not fit the CODR context.

Le Bon (2013) describes the crowd as a group of people, which is dominated by irrational impulses over which the members of the crowd have no control. The definition provided by Le Bon cannot be used in the context of CODR because it uses a subjective criterion to distinguish the crowd from other groups of people, namely, the psychological state of the members of the crowd. A scientific definition should be based on objective criteria.

4.2.1 Type of entity

The issue related to the type of entity of the crowd is guided by the following question: should the crowd be viewed as a single entity or as a collection of independent individuals? For an adequate answer, we have to find a stable criterion for distinguishing between a collective decision and an aggregation of decisions. In this regard, we adopt a definition of a "collective decision" provided by Tideman (2006).

Definition 4.2 (*Collective decision*): “A collective decision occurs when members of a collectivity make individual decisions that they would not make if the other members of the collectivity were not making related decisions. A collective decision thus entails coordination of intentions” (Tideman, 2006, p. 5).

Consequently, on the basis of the above-mentioned definition, we may state that if the members of the crowd are influenced by the other members of the crowd, then there is collective decision making. By contrast, if, when making their decisions, the members of the crowd are not influenced by the other members of the crowd, there is no collective decision making, but an aggregation of decisions. In the context of CODR, it means that if the members of the crowd can deliberate on their decisions or in some other way communicate with the other members with regard to the dispute, then they take a collective decision and act in their crowd behaviour as a single entity.⁵

4.2.2 Diversity

The issue related to the diversity within the crowd is guided by the question: what is the relevance of diversity for the quality of the decisions rendered through a CODR procedure? We claim that diversity has a high relevance for the quality of the jurors’ decisions. This claim is supported by three views adopted from the literature. First, it is argued that a reduction in the diversity of jurors minimizes the chances that alternative viewpoints have to be expressed in the process of deliberation (cf. Fiske, Gilbert, Lindzey, 2010, p. 1365). Second, Sommers (2006) has concluded that the decisions of diverse groups have certain advantages compared to the decisions made by homogeneous groups. In particular, through a real trial simulation, including video trial presentation, jury instructions, and deliberations, he identified specific advantages of racial heterogeneity for group decision making and demonstrated the influence of race-relevant jury selection questions on subsequent trial judgements (Sommers, 2006, pp. 597-612). Moreover, he found that heterogeneous groups consider a wider range of information than homogenous groups and deliberated longer than homogenous groups. Third, according to some studies, the accuracy in jury assessments is improved more by increasing the social diversity of jurors than by increasing the average educational level (Strodtbeck, James, Hawkins, 1957). Moreover, we would like to add that we have not found any opinion opposing our claim.

4.2.3 Governance of the crowd

The issue related to the governance of the crowd is guided by the question: who governs the crowd? The crowd can be either (A) self-governing or (B) governed by an organisation (cf. Brabham, 2013). We briefly discuss both of them below.

5 The advantages of CODR procedures allowing deliberations and CODR procedures not allowing deliberations are examined in more detail in Subsection 4.5.2.

A: Self-governing crowd

The self-governing crowd adopts its own policies and enforces them. For example, Wikipedia policies and guidelines are developed by the community of Wikipedia editors to “describe best practice, clarify principles, resolve conflicts, and otherwise further our goal of creating a free, reliable encyclopedia.”⁶ The enforcement of the policies and guidelines is performed by the Wikipedia editors.⁷ If an editor violates the policies and guidelines, other editors can persuade the violating editor to adhere to the policies. In case of a persistent violation of the policies and guidelines, the violating editor may be blocked temporarily or indefinitely from editing by administrators.

Administrators are editors who have been granted the right to block other editors from editing. The administrators are appointed after a discussion by editors.⁸ The blocked editor can use the Wikipedia general dispute resolution procedure or the dispute resolution procedure offered by the Wikipedia Arbitration Committee to appeal the decision of the administrator.⁹

B: Crowd governed by an organisation

If an organisation governs the crowd by adopting policies and enforcing them, the crowd becomes “a mere pawn in the organisation’s overall goals” (Brabham, 2013). For example, the crowd participating in the crowdsourcing platform Threadless is governed by skinnyCorp LLC, a company based in the United States.¹⁰ Threadless allows anyone to submit images for t-shirts, bags, and other products. The top-scoring images are printed on products and sold worldwide through the website of Threadless and their retail store in Chicago, USA. In order to submit images, the users of Threadless have to accept three documents adopted and enforced by skinnyCorp LLC, namely, (1) Privacy Policy, (2) Threadless.com Community Guidelines and Terms of Use, and (3) Design Challenge Submission Legal Terms & Conditions.¹¹ In order to vote for images, the users of Threadless have to accept only the first two of the aforementioned three documents.

6 See the Wikipedia article “Wikipedia: Policies and guidelines” available on http://en.wikipedia.org/wiki/Wikipedia:Policies_and_guidelines (last visited Jan. 3, 2017).

7 See the Wikipedia article “Wikipedia: Policies and guidelines” available on http://en.wikipedia.org/wiki/Wikipedia:Policies_and_guidelines (last visited Jan. 3, 2017).

8 See the Wikipedia article “Wikipedia:Administrators” available on http://en.wikipedia.org/wiki/Wikipedia:Administrators#Becoming_an_administrator (last visited Jan. 3, 2017).

9 See the Wikipedia article “Wikipedia:Policies and guidelines” available on http://en.wikipedia.org/wiki/Wikipedia:Policies_and_guidelines (last visited Jan. 3, 2017).

10 See <http://threadless.com> (last visited Jan. 3, 2017). The website was examined in more detail in Chapter 2.

11 The Privacy Policy of threadless.com is available on <https://www.threadless.com/info/privacy> (last visited Jan. 3, 2017). Threadless.com Community Guidelines and Terms of Use are available on <https://www.threadless.com/info/terms> (last visited Jan. 3, 2017). The Design Challenge Submission Legal Terms & Conditions are available on <https://www.threadless.com/threadless/legal/> (last visited Jan. 3, 2017).

4.2.4 Temporality of the crowd

The issue related to the temporality of the crowd is guided by the question: is the crowd a temporary group? Ohira, Masaki, and Matsumoto (2011, p. 252) explicitly note that the crowd is a temporal group. Thus, they distinguish between (a) a crowd composed from relatively permanent groups of people, such as countries, states, and provinces and (b) a crowd composed from temporal groups. The temporal element of a crowd was initially observed by two scholars in the twentieth century. Priority goes to Thouless (1937, p. 258) when he noted that the crowd is “quickly created and quickly dissolved”. Some thirty years later Horton and Hunt (1968, p. 374) stated that a crowd is “a temporary collection of people reacting together to stimuli.” Although the perspective on what is the crowd has been changed over the years, the characterisation of temporality remains.

4.3 INCENTIVES

In this section, we intend to answer the question: what are the incentives for people to participate as members of the crowd, through an open call, in a CODR procedure? At least five such incentives can be mentioned, namely, (A) the credit which the member will receive as a result of his contribution to the community, (B) entertainment, (C) the feedback received by the member, (D) financial remuneration, and (E) a sense of service to the community. We discuss them briefly below. We note that, since we do not have empirical data indicating the degree of importance of these incentives for the members of the crowd, we arranged the incentives in an alphabetical order.

A: Credit to the member for his contribution to the community

The first incentive is the credit, which the member will receive as a result of his contribution to the community (Van den Herik and Dimov, 2011(a), p. 250).¹² For example, if the decisions of the cases are published in the

12 Latour and Woolgar found that, for the scientific community, the most important part of the incentive system is the *cycle of credit*. They note that credit refers simultaneously to two dimensions of social status in the scientific community. First, it is linked with an individual’s ability to act in the community and effect change through assertion of claims, i.e., the cycle of credit describes how credit becomes manifest in grants, equipment, data, ideas and publications. Second, credit is a reward mechanism that marks one’s past contributions. See Latour and Woolgar, 1986. After conducting two round of interviews with 9 and 13 Wikipedians in the fall of 2004 and spring of 2005, Forte and Bruckman revealed that in some respects, the incentive system that motivates contributions to Wikipedia resembles the incentive system observed in the scientific community. They established that the notion of credit exists in Wikipedia both as reward and as credibility that empowers individuals in the community. However, they established also some differences between the incentive systems of Wikipedia and the scientific community because of the nature of encyclopedia-writing Enterprise, the technology on which Wikipedia is built and the values of Wikipedia. See Forte and Bruckman, 2005, p. 3.

online communities together with the names of the people who decided the cases, the incentive for the members of the crowd will be similar to the incentive for the contributors in Wikipedia; it is all comparable with the incentive system observed in the scientific community. In particular, the credit that the members receive motivates the members to move forward in their careers (cf. Benson and Morgan, 2014, p. 266). This statement is supported by a study of organisational control systems for university researchers conducted by Feist and Gorman (2012). The study found that the scientific recognition affects research performance positively (cf. Feist and Gorman, 2012).

B: Entertainment

The second incentive is entertainment. In this regard, we refer to a study conducted by Ipeirotis (2008). He asked a group of crowdsourced workers (so-called turkers) why they participated in Amazon's Mechanical Turk (AMT).¹³ AMT is a website using crowdsourcing that allows anyone to submit a task to be executed by crowdsourced workers. Twenty-one percent of the crowdsourcing workers in AMT listed as their choice "to kill time" and forty-two percent listed "entertainment". The crowdsourcing workers were motivated by (1) their intrinsic enjoyment of participating in crowdsourcing work and (2) by the opportunities it provides to socialise with others (cf. Malone et al., 2009, p. 5).

One way to provide entertainment to crowdsourcing workers is gamification, i.e., the introduction of game elements (e.g., achievements, badges, and leaderboards) into activities that are not games themselves (cf. Šimko and Bieliková, 2014, p. 26). For example, in the crowdsourcing application ESP, gamification is used to label images. ESP (Extra Sensory Perception) game is played by two partners who are randomly assigned by a large number of pairs at once (see Von Ahn, 2005). Players are not allowed to communicate with their partners. The only thing that the partners can see is an image. When the two partners type the same word, they move on to the next image (see Von Ahn, 2005). Thus, while playing games, players can label a large number of photos. An example of ESP photo to be described is given in Figure 13. In the screenshot we see the photo to be labeled.¹⁴ Moreover, we see which words are forbidden. Then to guide the game (in this particular instance) six words are offered. Other gadgets are self-explaining. In summary, we may conclude that entertainment can be a stimulus to perform tasks.

13 See <http://www.mturk.com> (last visited Jan. 3, 2017).

14 The screenshot of the crowdsourcing application ESP is obtained from the blog post 'Social consequences of social tagging' written by Lawley, L. on 20 January, 2005. The blog post is available on http://many.corante.com/archives/2005/01/20/social_consequences_of_social_tagging.php (last visited Jan. 3, 2017).

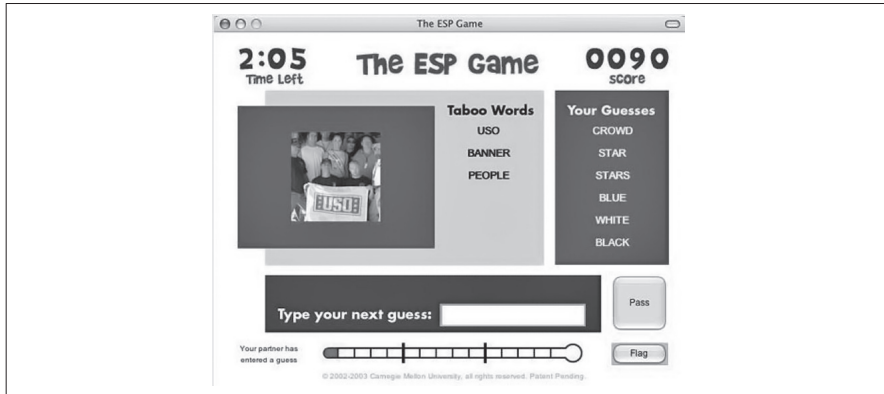


Figure 13. A screenshot of the crowdsourcing application ESP

C: Feedback received by the member

The third incentive is the feedback received by the member. For instance, the members of the crowd can receive a report displaying the total number of votes for and against the decision.¹⁵ Thus, they will know, e.g., whether their view on the case corresponds with the majority of the members of the crowd or whether their view was a single opposition view.

It is worth mentioning that studies conducted by Göritz (2006) and Maniaci and Rogge (2014) reveal that providing feedback to participants in web surveys is a highly efficient incentive. In particular, Göritz (2006) found that offering a summary of the research findings to participants in web surveys was a no less effective incentive than other types of incentives, including monetary payment. Maniaci and Rogge (2014, p. 464) established that providing individualised feedback at the end of a web survey based on each participant's responses can be an effective incentive even if the feedback consists merely of a calculation of total scores on a scale and a short paragraph describing what the score means. Maniaci and Rogge (2014, p. 464) also revealed that adding visualisation, i.e., showing graphics indicating an individual's score relative to the larger distribution, can increase the perceived value of feedback.

Because CODR procedures functioning as online opinion polls are a form of web surveys, we may expect that the provision of feedback to the members of the crowd in such CODR procedures will be an efficient incentive.

D: Financial remuneration

The fourth incentive is financial remuneration. Göritz (2006) established that material incentives significantly increased response rates of participants in crowdsourcing applications by an average of 19%. Göritz (2006) also established that non-monetary prizes ranging from approximately USD

¹⁵ The members of the crowd of iCourthouse.com who vote in a case can see a report displaying the total number of votes for and against the claim of the plaintiff.

50 to USD 200 were no less effective than monetary incentives. Maniaci and Rogge (2014, p. 464) point out that although larger incentives are generally more effective, the amount of the monetary incentives is not linearly related to the response rates. This means that very large monetary incentives will lead to relatively diminishing returns (cf. Maniaci and Rogge, 2014, p. 464).

According to the earlier mentioned study of Ipeirotis (2008), thirty-four percent of the crowdsourced workers stated in the survey that they participate for “Pocket Change / Extra Cash” as a motivation and forty-nine percent described it as “Income Purposes”. So, we may assume that a large part of the participants are involved in crowdsourcing for gaining financial profit. In this regard, it should be noted that the wages of the crowdsourced workers are typically rather low (cf. Felstiner, 2011, p. 24). For instance, an average crowdsourced worker at AMT earns approximately USD 1,25 per hour (see Felstiner, 2011, p. 24). At present, only the providers of online mock juries provide remuneration to the crowd members. TrialJuries pays USD 30 to each juror for his participation in a simple case.¹⁶ For more complex cases, TrialJuries pays a higher amount. Depending on the complexity of the case, JuryTest pays each juror between USD 5 and USD 50.¹⁷

E: Sense of service to the community

The fifth incentive is a sense of service to the community (cf. Rule and Nagarajan, 2010, p. 5).¹⁸ For instance, eBay initially had concerns on the recruitment of applicants to be jurors in eBay’s Community Court. However, eBay received more than sufficient applications to support the case volume (see Rule and Nagarajan, 2010, p. 5). Subsequently, eBay planned certain initiatives to be provided to the jurors as an award for their work, but no incentive payouts have been needed because the jurors were willing to participate out of their sense of service to the community (see Rule and Nagarajan, 2010, p. 5).

Serving the community for free is widely considered as an honorable activity (see Hein, 2009, p. 27). For example, the German word for volunteer work “*Ehrenamt*” means literary a honorific office (cf. Hein, 2009, p. 27). However, the performance of the members of the crowd, which are motivated merely by a sense of service to the community may be low because such members cannot be controlled by reducing their financial remuneration in case of a low-quality work (see Gagne, 2014, p. 424). In this regard, Gagne

16 See <http://www.trialjuries.com/trialjuries/signup.html> (last visited Jan. 3, 2017).

17 See <http://jurytest.com/index.cfm?action=howjur> (last visited Jan. 3, 2017).

18 Actually, some critics warned that the online communities may not truly function as communities. For instance, Carmichael (1998, p. 48) states that perhaps the eBay community site is stretching the definition of the community. Mendoza (1999, p. c6) questioned the truth of the eBay’s community calling it “personal trading community.” However, we will not enter into a discussion of the definition of an online community. For the purpose of this work, we will simply accept the definition of online community given by Kim (2000, p. 28), according to which, online community is “a group of people with a common purpose, interest, or activity, who get to know each other better over time.”

(2014, p. 424) points out that most organisations that hire volunteers cannot afford to be picky in relation to the choice of workers and must accept whatever work they can get from them.

4.4 TWO BROAD CATEGORIES OF DISPUTES TO BE RESOLVED THROUGH CODR

Currently we distinguish two broad categories of disputes to be resolved by CODR: online disputes and offline disputes. At this moment our focus is on online disputes because there is a pressing social need for a dispute resolution procedure addressing the growing number of online disputes. In this regard, it is worth mentioning that there will be one billion online disputes by 2017 (Grainer, Broetzmann, Beinhacker, Grainer, 2015). Yet, from the development in ODR we have learned that such a focus can easily shift from one perspective to the other and back again. Below we sketch the ODR development in this respect.

The very early proposals for using ODR processes targeted offline disputes. The idea was to shorten the time of the procedure by electronic communication. We refrain from giving examples and refer to Mommers (2005) for an overview. The actual history of ODR began with a major concern on disputes arising out of online activities, such as buyer-seller disputes on eBay (see Katsh, Rifkin, Gaitenby, 2000; Silkenat, Aresty, Klosek, 2009, p. 236; Katsh and Rabinovich-Einy, 2013, p. 52). Later, the success of ODR in this field encouraged the use of ODR for offline disputes (cf. Katsh and Rabinovich-Einy, 2013, p. 52). At present, ODR is used for resolution of both online and offline disputes (cf. Silkenat, Aresty, Klosek, 2009, p. 236; Katsh and Rabinovich-Einy, 2013). Because ODR applications efficiently and effectively meet the information processing and communication needs of disputants and third parties, it is expected that ODR will become increasingly valuable in both online and offline disputes (see Katsh, 2012).

The existing difference between online and offline disputes is commonly used when describing the types of disputes that can be resolved through ODR (see Solovay and Reed, 2003, pp. 3-30; Lodder and Zeleznikow, 2010, pp. 15-16). The difference is among others based on the specifics of the online disputes, namely, low-monetary value and cross-border character (cf. Rule, 2002, p. 6 and Prins, 2002, p. 299).

For our classification we have adopted the two types of disputes and show that both types can be resolved through CODR. We investigate the online disputes in Subsection 4.4.1 and the offline disputes in Subsection 4.4.2.

4.4.1 Online Disputes

We claim that CODR in general can be designed to resolve online disputes. In particular, CODR is rather suitable for resolving at least the following four types of online disputes: (A) disputes concerning feedback; (B) disputes

in global online job marketplaces; (C) disputes in social networks; (D) disputes in virtual worlds; (E) disputes in online games; and (F) online disputes submitted to jury-based litigation processes. We discuss all four briefly below. We remark that this categorization was not based on any existing categorization, but on our observations.

A: Disputes concerning feedback

Feedback on a transaction was usually seen as a present from the buyer for the seller. That was in the early days. Nowadays, an online feedback system allows buyers and sellers to publish on the Internet comments and ratings concerning a transaction concluded between them. In the beginning, the online feedback systems were developed with the aim to serve as a benchmark for the seller's reliability and promote trust between buyers and sellers. The consequences may vary depending on the comment given. For instance, a positive feedback allows the seller to charge higher prices (cf. Malaga, 2006, p. 822). In order to provide a better understanding of the online feedback systems, we explain below the operation of the online feedback systems of (A1) Amazon.co.uk and (A2) Elance.com.

A1: Amazon.co.uk

Amazon.co.uk is a website operated by Amazon.com, Inc., an American company operating in the field of e-commerce. Amazon.com, Inc. is the world's largest online retailer (cf. O'Connor, 2013).

Amazon.co.uk allows small and large companies to sell their products directly to customers.¹⁹ The products sold through amazon.co.uk include, but are not limited to, apparel, books, CDs, DVDs, electronics, food, furniture, jewelry, software, MP3 downloads/streaming, toys, VHSs, video, and video games. After each transaction with a company, customers are entitled to leave a feedback on amazon.co.uk. The feedback includes rating of the transaction ranging from 0 to 5 stars as well as a short comment about the customer's satisfaction with the transaction. Figure 14 displays a screenshot of feedback posted by customers of a company selling books on Amazon.co.uk. In Figure 14, we see that, within a period of twelve months, the seller of books was rated 35,260 times by buyers. The average rating received by the seller within the same time period was 4.9 stars out of 5 stars. Figure 14 also shows the latest comments received by the seller, e.g., "A most fabulous book and great ideas and pictures", "excellent service", and "Good value, quick delivery". Figure 14 clearly indicates the visibility of consumer feedback received by sellers on amazon.co.uk, which, in turn, makes such feedback an important marketing tool.

19 See a webpage entitled "Sell on Amazon" available on <http://services.amazon.co.uk/services/sell-online/how-it-works.html> (last visited Jan. 3, 2017).



Figure 14. A screenshot of feedback posted by customers of a company selling books on Amazon.co.uk

A2: Elance.com

Elance.com is a website owned by Elance, Inc., a company based in the United States. Elance.com allows companies to find, hire, manage and pay independent contractors (cf. Heck and Rogers, 2014, p. 208). The term independent contractor can be defined as a natural person, business, or corporation that provides goods or services to another entity under terms specified in a contract (Miller, 2013). The main difference between an employee and an independent contractor is that the independent contractor has the freedom to choose the means of accomplishing the work result (cf. Ferrera, Reder, Lichtenstein, Bird, Darrow, 2011, p. 511).

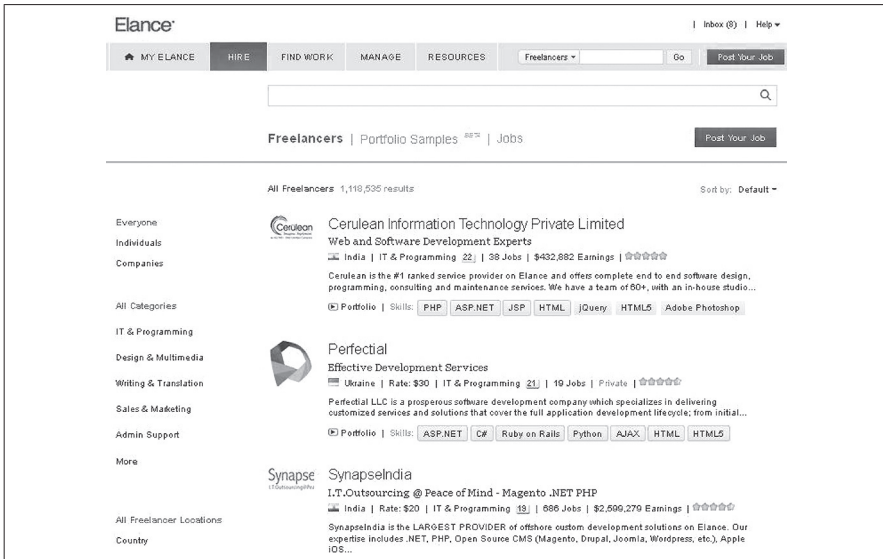


Figure 15. A list of freelancers in Elance.com, including the rating received by those freelancers

In 2012, independent contractors hired via Elance.com billed more than USD 200 million (see Heck and Rogers, 2014, pp. 209-210). Elance.com allows companies to give feedback to the independent contractors. The feedback includes a rating ranging from 1 to 5 stars and a short comment. The feedback is based on the quality of work and performance demonstrated by the independent contractors. Figure 15 displays statistics, including average rating, published by Elance.com in relation to three independent contractors. The three independent contractors are Cerulean Information Technology Private Limited, Perfectial, and SynapseIndia. According to the statistics shown in Figure 15, Cerulean Information Technology Private Limited completed 38 jobs and received an average rating of five stars for these jobs. Perfectial completed 19 jobs and received an average rating of four and a half stars for these jobs. SynapseIndia completed 686 jobs and received an average rating of four and a half stars for these jobs. Because the feedback posted by clients of independent contractors is visible, it is an important factor when choosing an independent contractor in Elance. For example, an independent contractor having an average rating of one star would raise distrust to potential customers.

Both Amazon.co.uk and Elance.com allow their customers to appeal feedback only on the basis of restricted grounds, e.g., obscene language or relation to a fraudulent transaction.²⁰ The reason for restricting the grounds for appeal may be the fact that the resolution of a large number of feedback disputes would require Amazon.co.uk and Elance.com to spend significant financial resources for the remuneration of dispute resolution professionals that have to resolve the disputes concerning feedback.

If a feedback system does not provide fair redress options for disagreements arising from feedback or offers only limited fair redress options (as it is the case with Amazon.co.uk and Elance.com), it may lose the trust of its users. In particular, the trust can be lost in two different ways. First, if negative reviews are removed in a non-transparent way, customers/independent contractors will question the accuracy of all reviews in the system, presuming that the overall feedback is being made falsely positive (see Rule and Singh, 2011, p. 4). Second, if unfair negative reviews are included in the system, then customers/independent contractors will become suspicious about the accuracy of the overall reviews in the system (see Rule and Singh, 2011, pp. 4-5).

Because CODR may resolve disputes without the need for hiring dispute resolution professionals, it may be applied to websites using feedback, such as Amazon.co.uk and Elance.com. This procedure will provide the customers/independent contractors who have given a negative feedback and received a negative reaction with a way to appeal it.

20 For more information on the grounds on which feedback published on Amazon.co.uk can be appealed, please visit "Feedback FAQs" available on <http://www.amazon.co.uk/gp/help/customer/display.html?nodeId=1040616> (last visited Jan. 3, 2017). For more information on the grounds on which feedback published on Elance.com can be appealed, please read Section 7 of "Site Usage Policy" available on <https://www.elance.com/p/legal/site-usage-policy.pdf> (last visited Jan. 3, 2017).

B: Disputes in global online job marketplaces

Nowadays, there are several global online job marketplaces using crowdsourcing, such as Elance.com²¹, Freelancer.com²², and Upwork.com.²³ These online job marketplaces offer a web-based set of services to match up companies with projects and independent contractors with relevant expertise (see Hugos, 2012, p. 185). In order to illustrate the scale of the existing global online job marketplaces, it is sufficient to note that Upwork.com has more than 12 million registered independent contractors and over 5 million registered clients.²⁴ Every year, contractors in Upwork.com perform work for more than USD 1 billion.²⁵

In the online job marketplaces, disputes may arise on whether the quality of the work is sufficient. Such disputes are currently resolved through ODR procedures offered by the online job marketplaces.²⁶ For example, Elance, Inc. offers an online mediation and online arbitration service to the users of the Elance.com (cf. Lacey, 2012, p. 241). The mediation process is conducted by an Elance representative who tries to get the two parties to agree on a resolution. If the parties cannot resolve their dispute through mediation, they can use the online arbitration service. The arbitration proceeding does not require the appearance of the parties in person. The cost for the arbitration proceeding is split into three equal parts among Elance, the contractor, and the company which hired the contractor. At present, the arbitration fee is USD 299 for jobs under USD 1000 and USD 599 for jobs over USD 1000 (cf. Lacey, 2012, p. 241).

Because global online job marketplaces give access to millions of independent contractors around the world who do not need to spend time or money on commuting, we may expect that the number of users of global online job marketplaces will increase (cf. Standing, 2014, p. 76).²⁷ So, the amount of the disputes could rise to such a number that cannot be handled by the traditional model of dispute resolution, including ODR (cf. Vernon, 2010, p. 2).

CODR may be a solution to this problem because it would allow global online job market places to employ crowdsourcing workers, providing low-

21 See <http://www.elance.com> (last visited Jan. 3, 2017).

22 See <http://www.freelancer.com> (last visited Jan. 3, 2017).

23 See <http://www.upwork.com> (last visited Jan. 3, 2017).

24 See <http://www.upwork.com/about/> (last visited Jan. 3, 2017).

25 *Idem*.

26 Elance offers free dispute resolution services for fixed price jobs managed within the Elance platform that have funds still held in an escrow or released from the escrow within the past 30 days. See <http://help.elance.com/entries/34320-Dispute-Assistance-for-Fixed-Price-Jobs> (last visited Jan. 3, 2017).

Freelancer allows any of its users to file a dispute against another user, as long as the project has a related milestone payment. See <http://www.freelancer.com/faq/topic.php?id=25> (last visited Jan. 3, 2017). Upwork allows its users to file disputes for both fixed-fee and hourly contracts. See <https://support.upwork.com/hc/en-us/sections/202260418-Disputes> (last visited Jan. 3, 2017).

27 As of December 2016, there were more than twelve million freelancers registered in Upwork. See <https://www.upwork.com/about/> (last visited Jan. 3, 2017).

cost legal services to resolve disputes between other crowdsourcing workers. In this regard, it is worth mentioning that a large number of legal professionals are registered in the global online job places.²⁸

C: *Social networks*

CODR is well suited for resolving disputes concerning insults in social network sites, such as Facebook and MySpace (cf. Schmitz, 2010, p. 230).²⁹ The Internet age has opened the door to a new form of social harassment called “cyber-bullying” performed on social networking sites such as Facebook and MySpace (cf. Peters Mayer, 2008, p. 115; Ong, 2010, pp. 110-111; Simmonds, 2014, pp. 79-91). The insults published in these websites are open to anyone in the friend list of the victim.

At present, if a user is insulted by a comment of another user, the insulted user needs to request Facebook to remove the insulting comment in accordance with Section 3(6) of the Terms of Service of Facebook.³⁰ Pursuant to Section 3(6), all users have to make a commitment not to “bully, intimidate or harass any user.” If Facebook finds that a message posted by a user falls within the scope of Section 3(6), Facebook will remove the message. However, it may happen that Facebook has the opinion that a message does not fall within the meaning of Section 3(6) despite of the fact that the message is considered as an insult by the person mentioned in the message. For example, Hofer and Torricelli (2009) comment a case when nurses posted online pictures of hospitalised patients together with ironic comments. The pictures provoked harsh protest in the public opinion as well as strong reactions from the employer and public authorities. Despite the strong opposition of the users of social networks, ironic comments such as “You are beautiful” may not be regarded by the administrators of social networks as insults.

By allowing the users of social networks to resolve disputes concerning disputes through CODR procedures, the operators of social network websites will provide the insulted persons with one more option – a CODR procedure that will be composed from users of the social networks. The peer community element will create an atmosphere of trust and respect in the procedure (see Schmitz, 2010, p. 213).

28 For example, on 13 December 2014, there were 9906 freelancers registered in Elance as providers of legal services. See <https://www.elance.com/r/contractors/cat-legal/p-5> (last visited Jan. 3, 2017).

29 Facebook has already implemented a system allowing users of Facebook applications and developers of such applications to communicate regarding disputes. For more information on the procedure, see https://developers.facebook.com/docs/games_payments/fulfillment/disputes#updatedisputestatus (last visited Jan. 3, 2017). The procedure is ODR as no crowd is involved in it. Since (1) many disputes may not be resolved by the current facilitative dispute resolution and (2) the use of internal human resources for the resolution of such disputes may be a significant financial burden for Facebook, the procedure may soon be transformed in an adjudicatory CODR procedure (similar to the ECRF) which will provide definitive solutions at no cost or low cost.

30 The Terms of Service of Facebook is available at <https://www.facebook.com/legal/terms> (last visited Jan. 3, 2017).

D: Virtual worlds

CODR seems to be an appropriate type for the dispute resolution process in virtual worlds³¹, such as *Second Life*³², *There*³³, and *Active Worlds*³⁴, which are populated by millions of “residents”, i.e., individuals who direct their avatars in an essentially limitless number of interactions with other residents in the three-dimensional worlds (cf. Larson, 2010; Gavrilova and Monwar, 2013, p. 114). The term avatar refers to the digital representation of a human being in a virtual world (see Damer and Hinrichs, 2014, p. 18).

At present, the virtual worlds do not have dispute resolution for resolving mechanisms between the citizens of those worlds. Thus, Section 6 of the Terms of Service governing *Second Life* states the following.

*“We are not responsible or liable for the conduct or content of any user. We reserve the right, but not the obligation, to monitor or become involved in disputes between you and other users.”*³⁵

The “Safety FAQs” published by *There* states that, if a user has a problem with another user, he can “instantly cut off all communication with another avatar.”³⁶ The website of *Active Worlds* states the following:

*“We can’t settle land disputes, remove unwanted objects, OR CLEAN UP ABANDONED buildings.”*³⁷

Here CODR may be a solution. CODR does promise to provide the citizens of the virtual worlds with an effective method to resolve their disputes. The solution is based on the fact that the members of the virtual communities, who act as a third neutral party in a CODR procedure, will have knowledge about the unique issues involved in virtual transactions, such as selling or exchanging a virtual property (cf. Schmitz, 2010, pp. 230 and p. 232; Fairfield, 2008, pp. 429-433). The main idea is that virtual property is substantially different from physical property (see Glushko, 2014, p. 512) by being a collection of bytes that a machine reads and converts into an image. Moreover, being members of the virtual communities, the citizens of the virtual worlds may be incentivized to participate in CODR by invoking their sense

31 The virtual world is an interactive computer simulation which lets its participants see, hear, use, and even modify the simulated objects in the computer generated environment. See Barfield, 2006, p. 649.

32 *Second Life*, <http://www.secondlife.com> (last visited Jan. 3, 2017).

33 *There*, <http://www.there.com> (last visited Jan. 3, 2017).

34 *Active Worlds*, <http://www.activeworlds.com> (last visited Jan. 3, 2017).

35 The Terms of Service governing *Second Life* is available at <http://www.lindenlab.com/tos> (last visited Jan. 3, 2017).

36 See the “Safety FAQs” of *There* available at <http://www.prod.there.com/info/whatis-there/safety/faq> (last visited Jan. 3, 2017).

37 See <http://www.activeworlds.com/help/aw43/document.php?building> (last visited Jan. 3, 2017).

of service to the community. Here we explicitly note that the CODR procedures in virtual worlds may not use financial and other incentives.

The existing ODR procedures in virtual worlds can serve as a starting point for the design of their CODR counterparts. For example, the virtual infrastructure (e.g., virtual buildings, virtual lamps, virtual tables, and virtual chairs) of the arbitration center in *Second Life* created by the Portuguese government can be easily used for resolving disputes through CODR procedures.

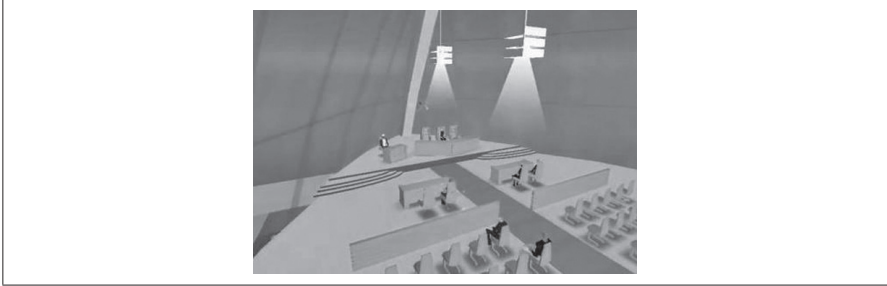


Figure 16. A virtual arbitration room of the arbitration center created by the Portuguese government in *Second life*

Figure 16 displays a screenshot of a virtual arbitration room of the arbitration center created by the Portuguese government in *Second life*. In the arbitration room, we see participants and audience in an arbitration process, virtual furniture that is used by audience and the participants in the arbitration process, and virtual lamps, which lighten the arbitration room. Currently nothing happens. There are several events that can occur. We mention three of them. First, the arbiter may ask questions to the parties. Second, the parties may present their cases to the arbiter. Third, the arbiter may pronounce the arbitration award.

E: Disputes in online games

Online games may generate a number of disputes, e.g., disputes related to virtual property (virtual weapons, virtual soccer players, virtual coins, etc.) and disputes concerning inappropriate online gaming behavior (cf. Barker, 2012; cf. Camner, 2014, p. 6). CODR is suitable for such disputes as their resolution often requires specific knowledge about gaming matters, which non-players may lack.

To our knowledge, League of Legends is the first online game which includes a CODR procedure for resolving disputes. The CODR procedure, named League of Legends Tribunal, allows players to report behavior that violates the game's community guidelines. Players who choose to participate in the Tribunal receive randomly assigned cases, to which they can assign one of two solutions, namely, "punish" and "pardon". It should be noted that jurors participating in the tribunal have a "justice rating", which can be reduced or increased depending on the consistency of their votes with the other jurors (Camner, 2014, p. 6).

F: Online disputes submitted to jury-based litigation processes

By using CODR, public courts can reorganize their jury-based litigation processes for resolving online disputes in such a way as to (1) make them more cost-efficient and (2) ensure that jurors have the skills necessary for resolving online disputes.

To make jury-based litigation processes more cost-efficient, CODR can (1) automatically shortlist jurors from a list of jurors willing to participate in the procedure, (2) enable disputants to remotely interview the shortlisted jurors and select a number of them, and (3) allow the selected jurors to participate in the procedure remotely. Thus, CODR may reduce trial expenses related to interviewing, selecting, and convening jurors to be conducted remotely.

To ensure that the jurors have skills required for the resolution of online disputes, CODR can include a comprehensive online test related to the disputed matter. By way of illustration, to pass the test, the jurors may need to perform various online operations, e.g., creating online accounts on software applications related to the dispute, conducting online transactions in online marketplaces, purchasing virtual property in virtual worlds.

Although, at present, there are no litigation-based CODR procedures, the European Small Claims Procedure (a litigation-based ODR procedure) demonstrates that litigation may include new forms of dispute resolution and, therefore, supports the speculation that litigation-based CODR procedures may appear in the future.³⁸

4.4.2 Offline Disputes

Next to online disputes we still have offline disputes. Here, CODR procedures can be designed to resolve offline disputes, such as family disputes and personal relationships disputes. Typical examples of CODR resolving offline disputes are CODR procedures functioning as online opinion polls. For example, after examining the databases of cases published on iCourthouse, we found out that also offline disputes were published for resolution on iCourthouse. The offline disputes include, but are not limited to (1) landlord-tenant disputes³⁹, (2) personal injury disputes⁴⁰, (3) sales of tangible goods⁴¹, (4) traffic disputes⁴², and (5) disputes related to purchase of real estates.⁴³

It should be noted that CODR has a potential to improve the cost-efficiency of jury-based litigation processes for resolution of offline disputes in the same way it can improve the cost-efficiency of jury-based litigation processes for resolution of online disputes.⁴⁴

38 For more information on the European Small Claims Procedure, see Section 2.2.1.C.

39 See, for example, case No 2012-11652 published on iCourthouse.com.

40 See, for example, cases No 2008-11618 and 2007-11593 published on iCourthouse.com.

41 See, for example, case 2007-11596 published on iCourthouse.com.

42 See, for example, case 2006-11582 published on iCourthouse.com.

43 See, for example, case 2006-11578 published on iCourthouse.com.

44 The potential of CODR to improve the cost efficiency of jury-based litigation processes for resolution of online disputes is discussed in Section 4.4.1(E).

4.5 THE CODR PROCEDURES

The development of CODR procedures has been completed in less than ten years. Still, at this moment, it is not a widely accepted procedure. Below we explain how CODR works, i.e., we examine the parties (4.5.1), the stages of CODR (4.5.2), and the characteristics of the CODR procedures (4.5.3).

4.5.1 Parties

Five parties may participate in a CODR procedure, namely, the disputants (P1 and P2), the third party (P3), the technology (P4), and the provider of the technology (P5). These five parties are examined in more detail below. The concept of the fourth party, the technology providing dispute resolution services, was introduced by Katsh and Rifkin (2001). The concept of the fifth party, the provider of the technology used for the provision of dispute resolution services, was introduced by Lodder (2006).

Disputants (P1 and P2)

The first two parties (P1 and P2) are the disputants. They are traditional for every form of dispute resolution. Disputants may act differently in different disputes (cf. Moffitt and Bordone, 2012). Here, we remark that, in the following, the complaining party P1 is also called the plaintiff and P2 is called the respondent. In the ECRF CODR procedure, a seller is the complaining person and the buyer is the respondent. In order to resolve disputes effectively, dispute resolution professionals need to have an understanding of how disputants view themselves, the dispute, and each other (see Moffitt and Bordone, 2012).

Third neutral party (P3)

The third neutral party is a prominent entity in decision making, whether it is in court cases or in dispute resolutions outside the court. There are three types of CODR procedures, viz. a pure CODR, a mixed CODR, and a CODR that uses negotiation to resolve disputes. Below we briefly describe them for the purpose of classifying them later.⁴⁵

In a pure CODR, the third neutral party (P3) is the crowd (see Figure 17a). A pure CODR procedure is a procedure in which the third party is composed by the crowd only.

In a mixed CODR, the third party (P3) is composed by (a) the crowd and (b) appointed mediators or adjudicators (see Figure 17b). A mixed CODR procedure is a procedure where the third party in the process of dispute

45 For more information on pure CODR, mixed CODR, and CODR resolving disputes through negotiation, please see Subsection 4.5.4.

resolution is a combination of members of the crowd and appointed professional arbitrators, judges, or mediators.⁴⁶

In CODR that uses negotiation as a mechanism for resolving disputes, the crowd only assists the parties, but it is not a party in the dispute resolution process (see Figure 17c). We explicitly remark that in this case technology fully replaces the position of the third neutral party.

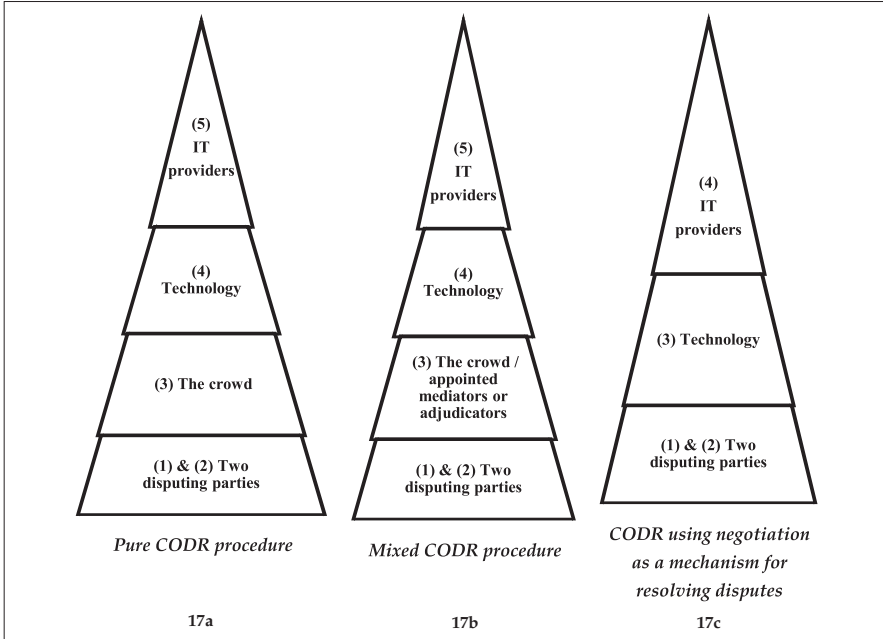


Figure 17. Parties in CODR procedures

The technology (P4)

The technology is regarded as a fourth party because of its independent input to the management of the dispute (cf. Katsh and Rifkin, 2001, pp. 93-117; Moore, 2014, p. 79). Clearly, in this case, we do not give the technology the position of a neutral party as we did above in P3, last line. Under the current circumstances, the fourth party may complete several tasks, such as organising information, sending automatic responses, shaping the writing communications in a more polite and constructive manner, e.g., blocking foul language, monitoring performance, scheduling meetings, clarifying interests and priorities (see Katsh and Rifkin, 2001, p. 129). The concept

46 It should be noted that the European Court of Human Rights (ECtHR) found that the participation of a panel with mixed membership (e.g., a judge and lay judges) is not considered a violation of the right of fair trial stated in Article 6 of the European Convention on Human Rights (ECHR). See the ECtHR case *Le Compte, Van Leuven and De Meyere v. Belgium* (1981) 4 EHRR 1. So, mixed CODR procedures may comply with the above-mentioned right of fair trial.

of fourth party suggests that software aids can collaborate with the third party, but does not replace it (cf. Katsh, 2012). Obviously, the technology used for dispute resolution can be highly diverse (cf. Moore, 2014, p. 79). For example, the technology may include software allowing electronic voting, face-to-face videoconferencing, and web chat.

It should be noted that designers of CODR procedures can use the technology to: (1) to implement certain values in CODR procedures; (2) achieve certain goals of CODR procedures; and (3) enhance the qualities of CODR procedures. Below, we discuss these three possibilities in more detail.

Regarding the first possibility, it should be noted that values embedded in technology may be better protected than values embedded in legal rules. This is because, in comparison with legal rules, technology-implemented restrictions are enforced directly (cf. Lessig, 2006, p. 110). For example, by embedding privacy principles in the technological design of CODR platforms, the designers of such procedures may integrate privacy values in them, without the need to rely on the enforcement of legal rules by law enforcement authorities.⁴⁷

Pertaining to the second possibility, technology can be used for achieving goals of CODR procedures. For instance, by enabling the technology to record all information collected during the dispute resolution process, the designers of CODR procedures will achieve at least two goals, namely, the accountability of the third neutral party and providing users of the platform with the opportunity to learn about the operation of the platform (Rabinovich-Einy, 2009, pp. 1-2).

In relation to the third possibility, the technology can enhance the qualities of CODR procedures. To illustrate, we discuss below how technology can enhance two qualities of CODR procedures, namely, speed and fairness. The technology can make a CODR procedure even faster by automatically aggregating the contributions of the members of the crowd and rendering final decisions based on the aggregated contributions. Without such technological features, the disputants will need to aggregate the contributions by themselves, which can delay the resolution of their disputes. The technology can enhance the fairness of CODR procedures by ensuring that these procedures comply with various fairness elements, including the elements of our interpretation of procedural fairness.⁴⁸ For instance, the independence of the third neutral party can be achieved by technological tools which (1) detect relationships between the disputants and the members of the crowd and (2) disallow members of the crowd who lack independence from participating in CODR cases.⁴⁹

47 The idea of implementing privacy in the design of IT systems was initially proposed by Cavoukian in 1990s (cf. Cavoukin, 2009).

48 Section 7 contains various proposals on how technology can ensure compliance with elements of our interpretation of procedural fairness.

49 For a more detailed discussion on how the technology can be used for ensuring independence of the members of the crowd, see Subsection 7.1.2.

The provider of the technology (P5)

The provider of the technology is depicted on the top of the pyramid as a fifth party because it delivers the technology that is used for resolving disputes to the fourth party (see Bol, 2005, pp. 23-29). The fifth party can be either an individual or an institution (cf. Poblet, 2012, p. 15). The concept of fifth party has been developed to explain the liability of the provider of the technology in relation to (1) the third party and / or (2) the parties having a dispute as well as (3) the possible contractual relationships between the provider of the technology and the other parties. The liability of the provider of the technology may arise from a technical failure resulting in the interruption of videoconferences or chat sessions. The contractual relationships between the provider of the technology and the parties may include, for example, relationships concerning the availability and the type of the technology used for dispute resolution. Although the provider of the technology is not a topic of our research, it is wise to understand that the provider may have some influence on the course of the dispute. The influence can even be exercised beyond the knowledge and observation of the provider.

4.5.2 Stages of CODR

Below, we provide an overview of the CODR procedure from the beginning to the end. We will adapt the framework provided by Katsh and Rifkin (2001) and implement the ideas taken from the Malone framework.⁵⁰ The Katsh and Rifkin framework distinguishes four different stages for the ODR procedure, namely, (1) filling the complaint, (2) notifying the respondent, (3) reaching the decision, and (4) enforcing the decision (Katsh and Rifkin, 2001). We follow the stages, but clearly deviate from the description of the stages as given by Katsh and Rifkin (2001). For our description we will use ideas from Malone's framework supplemented by our own observations and ideas. Where we adopted ideas related to the description of the stages by Katsh and Rifkin or the Malone framework we will mention it explicitly.

Stage 1: Filing the complaint

The first stage of the CODR process is the filing of a complaint. The electronic complaint form is the first interaction between the participants P1 and P2 and the dispute resolution provider P3. As Katsh and Rifkin (2001, p. 94) pointed out, every such interaction should be an opportunity to promote convenience and build trust. What does this mean in the context of CODR?

With regard to the convenience of the complaint, it means that special technological skills or equipment should not be required from the disputants to fill their complaints. For instance, the complainant should not be

50 Since the Malone framework classifies crowdsourcing applications and CODR procedures are crowdsourcing applications, an empirical framework of CODR based on empirical studies may significantly overlap with the Malone framework. To avoid such an overlap, we decided not to develop a framework based on empirical studies.

obliged to embed fonts in the complaint because it may require special skills.⁵¹ For example, in this context, it should be pointed out that the United States Patent and Trademark Office (USPTO) accepts only patent applications containing embedded fonts.⁵² As a result, online patent applications are occasionally rejected by the USPTO (Pressman, 2012, p. 298).

The filling in of the complaint should require only basic computer skills, such as using the mouse and the keyboard as well as running and closing basic software applications. This is because the differences in digital proficiencies create inequality (see Ragnedda and Muschert, 2013, p. 2). PeopleClaim is an example of a CODR platform using a simple online complaint form (see Figure 18). In Figure 18, we see that the complaint form used by PeopleClaim provides the complainant with options from which to select the type of entity of the respondent (business, individual, professional, government agency, or other) and the relationship of the complainant to the respondent (e.g., customer/client, patient, employee, tenant, party to an agreement). Such options facilitate the filling in of the complaint.

Figure 18. A complaint form used by PeopleClaim

We note that making a complaint is further convenient for the complaining party if the cost for filling in is low. In this regard, it should be noted that all existing CODR procedures functioning as online opinion polls and arbitration tribunals rendering self-enforceable decisions do not charge the parties fees for receiving dispute resolution services. Yet, the complaint should not only be easy to fill in, but it should also be easily understandable by the crowd. If the crowd is composed of laypersons, the complaint should be directly comprehensible to all members of the crowd. Otherwise, there is a risk that the crowd would not understand the complaint and, as a result, could make a wrong decision.

51 The term “font embedding” refers to a method of including fonts in documents. By embedding a font with a document, the creator of the document will ensure the text will appear correctly on the computers of other users. For more information on “font embedding”, see the following webpage created by Microsoft: <http://www.microsoft.com/Typography/embed/embed.aspx> (last visited Jan. 3, 2017).

52 See a webpage “20 of the Most Frequently Asked Questions from Customers” published on http://www.uspto.gov/patents/ebc/top_questions_ebc.jsp (last visited Jan. 3, 2017) by the United States Trademark and Patent Office.

To build trust in a complaint procedure, a CODR system should provide information at regular intervals about what happens in CODR (cf. Katsh and Rifkin, 2001, p. 94; Cortés, 2010, p. 78). Moreover, similarly to the information systems used by public organisations for providing services to the public, other factors, such as the availability, confidentiality, and non-repudiation should be considered in order to increase the level of trust in the CODR systems (cf. Kritis, 2006, p. 18; Moffitt and Bordonne, 2012).

Stage 2: Notifying the respondent

The second stage of the CODR process is notifying the respondent (i.e., the person who is addressed by the complaint). But who should inform the respondent? There are two options, namely, (1) a CODR platform that is designed in such a way that it automatically sends a notification to the respondent's email provided by plaintiff, or (2) an internal messaging system that sends a message to the online profile of the respondent. The second option applies only to cases when both parties are members of the same online community.

The first variant for notifying the respondent is used in most of the present CODR procedures.⁵³

The second variant was used only by the ECRF. If a dispute has arisen from a transaction related to some online community, then sending a message to the internal community account of the respondent seemed a more reliable way for notifying the respondent than sending a notification to an email address provided by the plaintiff.

We believe that the use of an internal messaging system will provide the respondent with more trust in the notification. If the respondent receives the notification to his email address (provided by the plaintiff), he may consider it as a scam. For example, in the past, scammers sent an official email that appeared to be from eBay, to bidders in eBay who lost an auction. The email stated that the sellers gave them a second chance to win the auction (cf. McAdams, 2014, p. 197). In the email, the bidders were requested to send their credit card details to the scammers. If the bidders agreed to do so, the scammers used the data to commit crimes. In order to prevent its users from such scams, eBay uses an internal messaging system, called eBay Messages, to send notifications informing the bidders that they have a second chance to win an auction (cf. McAdams, 2014, p. 197).

Stage 3: Reaching the decision

The third stage of the CODR procedure is reaching the decision. Two questions need to be answered with regard to how the crowd may lead the CODR process, similar to the traditional mediators and adjudicators, and will subsequently reach a decision. The two questions are as follows: (A:)

53 Sidetaker.com and iCourthouse notify the respondent by an email provided by the plaintiff.

How can the crowd ask questions to the parties? (B:) Should the decision in CODR be taken after deliberations?

A: How can the crowd ask questions to the parties?

For the question “How can the crowd ask questions to the parties?”, there is definitely a way which allows every member of the crowd to ask the parties questions. However, if the crowd contains many people, allowing everyone to ask questions can make the procedure extremely slow and burdensome. Such a procedure will not promote convenience and trust (cf. Katsh and Rifkin, 2001, p. 94). Assume that every member of a crowd (consisting of 100) people asks questions to the parties, then answering to every question will take a large amount of time, especially if the procedure allows rebuttal and surrebuttal. Consequently, there is a relation between the building block “the crowd” and the building block “the organisation structure and process” of the framework of CODR built on the basis of the Malone framework. More particularly, the larger the number of the crowd, the slower the CODR process when allowing deliberations.

Below, we mention three approaches to a solution of the problem related to the large amount of time required for conducting deliberations amongst the members of a large crowd.

A first approach to this problem is to ask the parties only to put forward questions supported by the majority of the crowd. However, in this case, the questions will not reflect the opinions of the entire group. Yet, bringing many different views on a problem increases the likelihood that a solution will be found (cf. Page, 2008).

The second approach is to allow only some randomly chosen members of the crowd to ask questions. This idea seems plausible, but the small group of people entitled to ask questions will not reflect the opinions of a diverse crowd.

The third approach is to allow some of the members of the crowd which best reflect the diversity of the group to ask questions. To find the appropriate members of the crowd, a questionnaire can be given to the crowd and, on the basis of the results, the CODR platform can automatically establish a representative group.

B: Should the decision in CODR be taken after deliberations?

If CODR allows deliberation, group polarisation can occur and lead to irrational aggregated decisions which will not promote trust and convenience (see Sunstein, 2009; Katsh and Rifkin, 2001, p. 94). Group polarisation means that during deliberation people are likely to move towards a more extreme point in the direction to which the group members were originally inclined (see Sunstein, 2009, p. 60). Group polarisation appears because of two reasons (cf. Abelson, 2014, p. 28). First, each group member may be exposed to potentially new arguments, which support the shared initial position of all group members. Second, the group members may try to position themselves

more extremely on the issue than their peers in order to present themselves as being more pure on the issue (Abelson, 2014, p. 28).

If CODR does not allow deliberations, the opinion of a minority of the crowd will not be taken into account at all by the majority of the crowd. As a result, members of the minority will not be able to present important conclusions that can otherwise change the opinion of the majority. Similar to a dictatorship regime where the opposition does not have the right to present its views, this seems to be a repression of the minority by the majority.

Hence, there is not a straightforward answer to the question of whether a decision in CODR should be made after deliberation. If the designers of CODR procedures would like to allow deliberation, they need to put measures to reduce the chance of occurrence of group polarisation. This can be done, for instance, by ensuring that the members of the crowd have diverse expertise. As Merchant (2010, p. 125) states, such diversity “will provide a broader set of perspectives, which, in turn, reduces the potential for mindless conformity.” We have already discussed the benefits of diverse crowd in Subsection 4.2.2 related to the first building block “the crowd” of the framework of CODR built on the basis of the Malone framework.

If the designers of CODR procedures do not want to allow deliberation, they will need to ensure that the opinion of a minority of the crowd will be taken into account by the majority of the crowd. This can be done, for example, by collecting the pre-decision dissenting opinions and providing them to the majority of the crowd.

Stage 4: Enforcing the decision

The fourth stage of a CODR procedure is the enforcement of the decision. In this regard, it must be said that the outcome of a CODR procedure can be either a *recommendation* or a *decision*. If it is a recommendation, obviously there is no need for enforcement.

At present, the decisions rendered by CODR procedures are not legally binding and can be enforced only through private authorities. In the Netherlands, Jongbloed and Nakad-Weststrate (2010) developed and advocated a new procedure in which the notaries play an important role. With the help of the notaries an enforcement procedure might be possible. We consider this procedure beyond the scope of our research. We recommend the reader to follow the development with interest.

Moreover, software that the online communities use offers unprecedented possibilities for automatic self-enforcement (cf. Van Kokswijk, 2010, p. 242). A self-enforcement mechanism is a mechanism that does not rely upon the public legal system (see Kaufmann-Kohler and Schultz, 2004, p. 120). Instead, it relies on the enforcement of a private entity, such as a company or an organisation.

Self-enforcement can be enacted by software operations affecting the parties. We provide two examples. The first example is the enforcement of the decisions rendered under the Uniform Domain-Name Dispute-Resolution Policy (UDRP) by the registrar of the disputed domain name who per-

forms software operations leading to cancelation, transfer or other changes to domain name registrations.⁵⁴ The second example is the ECRF where the decision of the jury is enforced through software operations conducted by an eBay Customer Service Representative, who, if appropriate, removes the feedback (cf. Van den Herik and Dimov, 2011a, p. 247). The advantage of self-enforcement is that the cases are enforced immediately and do not drag on without a resolution (cf. Thomson and Sherr, 2012, p. 34). The disadvantage of self-enforcement is that the pre-enforcement situation can be reverted back by a court decision. The reason is that self-enforceable measures are binding only to entities that have committed to abide by the rules allowing self-enforcement.

Self-enforcement is a feasible option for CODR procedures resolving disputes in online communities because it will underline the autonomy of these communities. An involvement of the government in the online dispute resolution process, including the enforcement of the decision, may be undesirable by the members of online communities and accepted as an intrusion. Consequently, in online communities, self-enforced CODR procedures may be a more trusted method of dispute resolution than CODR procedures enforced by the government. It is worth mentioning that ODR procedures, including CODR procedures, need to promote trust in order to operate effectively (cf. Katsh and Rifkin 2001). Thus, the promotion of trust is an important aspect not only in relation to the enforcement of the decisions, but to all stages of the fourth building block (organisation structure and process) of the framework of CODR built on the basis of the Malone framework.

4.5.3 Characteristics of CODR procedures

In order to provide an adequate understanding of CODR, we use six criteria to identify certain characteristics of the three types of CODR procedures, namely, online opinion polls, online mock jury systems, and arbitration tribunals rendering self-enforceable decisions. The criteria were selected based on a review of documents published by CODR providers. Important sources are: (a) Rules of Procedures and (b) documents containing answers to Frequently Asked Questions (FAQ).⁵⁵ The characteristics reveal (1) the specifics of the different types of CODR procedures related to the dispute resolution

54 A registrar is a company or organisation that is involved in registering domain names on the Internet. See Stafford, 2008, p. 20. It should be noted that each registrar has concluded a Registrar Accreditation Agreement with the ICANN obliging the registrar to enforce UDRP decisions. The Registrar Accreditation Agreement is available on <https://www.icann.org/resources/pages/approved-with-specs-2013-09-17-en> (last visited Jan. 3, 2017).

55 We reviewed the documentation related to: Allrise.com (www.allrise.com); eBay's Community Review Forum (the archived webpage is available at <https://web.archive.org/web/20110227000536/http://ebaycourt.com/cc/courtindex.jsf>); eJury (www.ejury.com); iCourthouse (www.icourthouse.com); PeopleClaim (www.peopleclaim.com); Sidetaker.com (www.sidetaker.com); VirtualJury (www.virtualjury.com) (last visited Jan. 3, 2017).

mechanism (Criterion 1) and (2) the specifics of the third party participating in the procedures (Criteria 2-6).

The criteria are as follows.⁵⁶

Criterion 1: the mechanism used for resolving disputes.

Criterion 2: eligibility to participate in CODR as a member of the crowd.

Criterion 3: the number of members of the crowd: fixed or not fixed.

Criterion 4: composition of the third neutral party in the process of dispute resolution.

Criterion 5: use of deliberations between the members of the crowd.

Criterion 6: the number of members of the crowd: a small or a large group of people.

Below, we discuss the six criteria. We note that the third and the sixth criteria are related to the number of the members of the crowd. At the end of this subsection, we present the characteristics of the three types of CODR procedures in Table 2.

Criterion 1: The mechanism used for resolving disputes

The present CODR procedures use negotiation as a mechanism for resolving disputes. By providing the disputants with jury trial-like decisions, the online opinion polls and the online mock juries allow the disputants to understand their BATNA (Best Alternative to a Negotiated Agreement). Allowing the crowd to give its opinion on the BATNA during the negotiation proceedings may increase the chance of a settlement between the parties. The reason is that the crowd's opinion may remove any unrealistic optimistic expectations with regard to other mechanisms of dispute resolution, such as arbitration and litigation (cf. Lodder and Zeleznikow, 2010, pp. 41-43).

The eBay's Community Court, which is the only example of arbitration tribunals rendering self-enforceable decisions, resolved disputes through a non-binding form of arbitration (cf. Stong, 2000, p. 140).⁵⁷ In comparison to

56 These six criteria were chosen because they will reveal important procedural characteristics of CODR procedures, namely, the mechanism for resolving disputes (Criterion 1) and the nature of the third neutral party (Criteria 2, 3, 4, 5, 6). The mechanism for resolving disputes is an important procedural characteristic of every dispute resolution as it serves for classification of dispute resolution procedures in facilitative and adjudicative. While facilitative dispute resolution may be appropriate in the early phases of a conflict, adjudicatory dispute resolution may provide a solution if the conflict is aggravated and cannot be resolved by the parties themselves (Musson, 2013, p. 56). The nature of the third neutral party is especially important in the field of CODR because one of the main differences between CODR and other dispute resolution procedures, including ODR, lies in the third neutral party. More specifically, while the third neutral party in traditional dispute resolution is composed by judges, arbitrators, or mediators, the third neutral party in CODR is composed by a group of people, which is called "crowd".

57 It should be noted that it is disputable whether the non-binding arbitration can be called arbitration. For the purpose of this study, we will accept that the non-binding arbitration is a form of arbitration. For more information about this dispute, see Mironova, 2010, p. 103.

the binding arbitration, the decisions rendered in the non-binding form of arbitration are not enforceable by state authorities.

At present, there are no CODR procedures resolving disputes through mediation and litigation. However, there are proposals for replacing the traditional juries in civil litigation procedures by cyberjuries, which would be a form of CODR (cf. Marder, 2005). For example, cyberjurors may replace the traditional juries in civil litigation (cf. Marder, 2005, p. 191). Pursuant to our definitions of CODR and crowdsourcing, dispute resolution procedures using cyberjuries should be regarded as CODR procedures only if the cyberjurors participate in the dispute resolution process through an open call.

Criterion 2: Eligibility requirements that the crowd should satisfy in order to participate in CODR

The eligibility is based on requirements, which the crowd should satisfy in order to participate in CODR. We observe that CODR procedures may or may not require the parties to satisfy certain specific requirements to participate in CODR. While all of the online opinion polls do not require the parties to satisfy any specific requirements, the online mock juries and the arbitration tribunals rendering self-enforceable decisions require the parties to satisfy such requirements.⁵⁸ The reason for adding specific requirements to participating in a CODR procedure is to gather a crowd that has appropriate knowledge for resolving the dispute. Below, we examine the specific requirements that the crowd in the existing online mock juries and the ECRF should satisfy in order to participate in CODR.

Both eJuries and TrialJuries require the jurors to satisfy the six qualifications required for actual jury service in the United States.⁵⁹ These six requirements are:

- (1) being at age of at least 18 years;
- (2) having a U.S. citizenship;
- (3) having sound mind and good moral character;
- (4) be able to read and write;
- (5) have never been convicted of a felony; and

58 For example, iCourthouse user agreement available at www.i-courthouse.com/main.taf?area1_id=front&area2_id=useragreement (last visited Jan. 3, 2017) does not mention any specific requirements that the members of the crowd should satisfy in order to participate in CODR. The same is valid for the Terms of Use of PeopleClaim available at www.peopleclaim.com/Terms.aspx (last visited Jan. 3, 2017). Nevertheless, the online opinion polls require the disputants to meet certain general requirements included in the legal documents of their websites. Such general requirements may include, but are not limited to, registration of an account, providing correct registration data, agreeing with the legal documents (e.g., terms of use, privacy policies, user agreements) of the online opinion polls.

59 See the official webpage of eJury available at www.ejury.com/jurors_learn_about.html#qual (last visited Jan. 3, 2017) and FAQ page of TrialJuries available at www.trialjuries.com/trialjuries/faq.html (last visited Apr. 4, 2016).

- (6) not be under indictment or other legal accusation of misdemeanor theft or felony theft or any felony charge.⁶⁰

JuryTest requires the jurors to attest to the fact that they are not lawyers or representatives of insurance companies.⁶¹ To become OnlineVerdict jurors, the members of the crowd must reside in a venue selected by the person who posted the online mock case.⁶²

On top of the six requirements above, the ECRF requires the jurors to satisfy cumulatively the following three requirements.⁶³ These three requirements vary depending on whether the juror is a seller or a buyer. A seller using eBay India was allowed to participate in the open call if he: (1) was registered on eBay India for six months; (2) had 20 feedback scores as a seller with an overall rating of 97% positive feedback; and (3) completed at least one transaction on eBay as a buyer and one as a seller. A buyer was allowed to participate in the open call if he: (1) was registered on eBay India for six months; (2) had 10 feedback scores with overall rating of 97%; and (3) completed at least 10 buyer transactions.

Criterion 3: The number of members of the crowd: fixed or not fixed

The number of members of the crowd in CODR procedures can be either fixed or not fixed. The number of members of the crowd in online opinion polls is not fixed. The reason is that such procedures allow an unlimited number of people to vote within a defined or undefined period of time. Sidetaker is an example of a CODR procedure allowing an unlimited number of people to vote within a defined period of time. iCourthouse is an example of a CODR procedure allowing an unlimited number of people to vote within an undefined period of time. In iCourthouse, decisions are never rendered and one can vote in a case posted a long time ago. The ECRF was the only example of a CODR procedure with a fixed number of crowd members. In the ECRF, the disputes were resolved by a fixed number of 21 jurors. If the first 11 people voted in favour of one of the parties, the case was closed and a decision rendered.

Criterion 4: Composition of a third neutral party in the process of dispute resolution

All past and present CODR procedures are pure CODR procedures, i.e., the third neutral party is composed of crowd only. However, in the future, mixed CODR procedures may be created. In such procedures, the third neutral party could be composed of a combination of (1) appointed profes-

60 See the official webpage of eJury available at www.ejury.com/jurors_learn_about.html#qual (last visited Jan. 3, 2017).

61 See the webpage of JuryTest that can be used for registration of jurors. Available at www.jurytest.net/index.cfm?action=signupjur (last visited Jan. 3, 2017).

62 See Juror's FAQ available on www.onlineverdict.com/jurors/juror-faqs (last visited Jan. 3, 2017).

63 We give the requirements for eBay India because the ECRF was used for resolution of disputes arising out of transactions completed through eBay India (cf. Miles, P., 2009).

sional arbitrators, judges, and mediators and (2) jurors from the crowd.⁶⁴ For instance, the third neutral party can be composed of 3 appointed arbitrators and 30 cyberjurors chosen by an open call. The appointed arbitrators, judges, and mediators can (a) instruct the juries on the law before they start their deliberations, (b) answer questions that the jury might have during its deliberations, and (c) suggest to the online jurors that they should take the vote on the basis of “evidence-driven deliberations” (cf. Marder, 2006, p. 266). The appointed neutrals can also ensure that the jury will not conduct its deliberations free from professional observation. Moreover, they can avoid the formation of coalitions. A mixed CODR would exist, for example, if the traditional juries are replaced by cyberjuries who are chosen by a local community through an open call.

Criterion 5: Use of deliberations between the members of the crowd

All past and present CODR procedures disallow deliberations. The lack of deliberations has certain advantages. After examining 3048 jury-eligible citizens in Arizona, USA, the researchers Schkade, Sunstein, and Kahneman (1999, p. 33) found that deliberating juries tend to generate, with respect to decisions concerning monetary compensation for punitive damages, greater unpredictability than is present in the judgements of the jurors who compose them (Schkade, Sunstein, Kahneman, 1999, p. 4). The deliberations increased unpredictability in the particular sense that the judgement of one group of six (or twelve) jurors was highly unlikely to predict the judgement of another group of six (or twelve) jurors.

Criterion 6: The number of members of the crowd: a small or a large group of people

The crowd in CODR procedures can be either a small group of people or a large group of people. In order to provide a clear distinction between these two groups, we arbitrarily accept that a crowd of 30 and more individuals is a large group of people and a crowd of 29 and less individuals is a small group of people.

Because online opinion polls allow an unlimited number of people to vote within a defined or undefined period of time, the crowd participating in a case can be either a small group of people or a large group of people. The crowd of the online mock jury systems can also be either a small group of people or a large group of people. An example of such an online mock jury system is OnlineVerdict where the number of jurors participating in a case can be either 25 or 50.⁶⁵ The disputes in the ECRF were resolved by a small group of people, more particularly, the number of jurors reads 21.

64 Such procedures will resemble the U.S. court system which is composed from professional judges and jurors elected from the local population (Von Mehren and Murray, 2007, pp. 206 - 227).

65 See attorney’s FAQ available at <https://www.onlineverdict.com/attorneys/faqs/> (last visited Jan. 3, 2017).

In relation to CODR procedures in which the crowd is a large group of people, we remark that such a large group may, in the future, consist of thousands of individuals. From the chess game *Kasparov versus the World*, it can be seen that a discussion concerning a certain future move decision is executable even amongst 50,000 people located in different countries around the world. In this game, which was played in 1999 over the Internet, Garry Kasparov met the World Team which took its decisions, after a consultation in an online forum, on the basis of a plurality vote (see Nalimov, Wirth, and Haworth, 1999, p. 199; Fadul, 2008, p. 99). The decisions of such a large group in relation to a public dispute may be considered by policy makers. There are already cases where the online opinions of a large number of people initiated legislative proposals. For instance, the U.S. Unlocking Consumer Choice and Wireless Competition Act was a response to an official online petition, which collected more than 100,000 signatures in favour of the legalisation of unlocking of mobile phones (cf. Dimov, 2013). The White House advisor Jeff Zients called the Act an “example of democracy at its best: bipartisan congressional action in direct response to a call to action from the American people” (see Dimov, 2013).

However, the members of the crowd in a large group can have several difficulties when communicating with each other in “real” time. Allowing hundreds of people to express their opinion will make the procedure very long.

| Criteria | Online opinion polls | Online mock jury systems | Arbitration tribunals rendering self-enforceable decisions |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Criterion 1: The mechanism</i> | <ul style="list-style-type: none"> - litigation: X - arbitration: X - mediation: X - negotiation: V | <ul style="list-style-type: none"> - litigation: X - arbitration: X - mediation: X - negotiation: V | <ul style="list-style-type: none"> - litigation: X - arbitration: V - mediation: X - negotiation: X |
| <i>Criterion 2: Eligibility</i> | <ul style="list-style-type: none"> - open to anyone: V - open to people who satisfy specific requirements: X | <ul style="list-style-type: none"> - open to anyone: X - open to people who satisfy specific requirements: V | <ul style="list-style-type: none"> - open to anyone: X - open to people who satisfy specific requirements: V |
| <i>Criterion 3: The number</i> | <ul style="list-style-type: none"> - fixed number: X - non-fixed number: V | <ul style="list-style-type: none"> - fixed number: V - non-fixed number: X | <ul style="list-style-type: none"> - fixed number: V - non-fixed number: X |
| <i>Criterion 4: Composition</i> | <ul style="list-style-type: none"> - crowd only: V - crowd and appointed dispute resolution professionals: X | <ul style="list-style-type: none"> - crowd only: V - crowd and appointed dispute resolution professionals: X | <ul style="list-style-type: none"> - crowd only: V - crowd and appointed dispute resolution professionals: X |
| <i>Criterion 5: Allowing deliberation</i> | <ul style="list-style-type: none"> - allowing deliberation: X - disallowing deliberation: V | <ul style="list-style-type: none"> - allowing deliberation: X - disallowing deliberation: V | <ul style="list-style-type: none"> - allowing deliberation: X - disallowing deliberation: V |
| <i>Criterion 6: The number – small vs large</i> | <ul style="list-style-type: none"> - a small group of people: V - a large group of people: V | <ul style="list-style-type: none"> - a small group of people: V - a large group of people: V | <ul style="list-style-type: none"> - a small group of people: V |

Table 2. *The characteristics of the three types of past and present CODR procedures*

In order to solve this difficulty, large groups tend to formalise their meetings by setting agendas and following a protocol to control discussion (cf. Griffin and Moorhead, 2011, p. 247).

For adequate reading of Table 2, we reiterate the six criteria below.

Criterion 1: the mechanism used for resolving disputes.

Criterion 2: eligibility to participate in CODR as a member of the crowd.

Criterion 3: the number of members of the crowd: fixed or not fixed.

Criterion 4: composition of the third neutral party in the process of dispute resolution.

Criterion 5: use of deliberations between the members of the crowd.

Criterion 6: the number of members of the crowd: a small or a large group of people.

4.6 CHAPTER SUMMARY

In this chapter, we provided a framework of CODR. In particular, we adopted the Malone framework and its four building blocks. They exist in every CODR procedure. These building blocks are (1) the crowd, (2) incentives, (3) the two types of disputes that can be adequately resolved through CODR, and (4) the CODR procedure.

Our discussion of the building blocks of CODR started with a definition of the term crowd. Thus, the crowd participating in CODR is not a blurry concept referring to a large number of persons gathered closely together, but a clear concept that can be applied for the needs of a scientific analysis.

After discussing the concept of the crowd, we focused on the incentives that may motivate the crowd to participate in a CODR procedure. This issue is important because the incentives provided to the crowd have an impact on the operation of a CODR procedure. A CODR procedure where the crowd has no incentives does not work properly. This is most prevailing when a lack of sufficient members of the crowd is faced, since then a long delay in the resolution of the cases will occur. Our study indicated that the crowd can be motivated to participate in CODR because of five incentives, namely, (a) sense of service to the community, (b) entertainment, (c) the financial remuneration, (d) the credit for the crowdsourced contribution, and (e) the feedback received by the members of the crowd. Each of these incentives can be an effective motivation for certain categories of people. For example, (a) the credit that the members of the crowd will gain if their contributions are published may motivate academicians and law practitioners who want to gain popularity in their professional circles and (e) the sense of service to the community is an appropriate incentive in online communities, such as Wikipedia and eBay.

This chapter also established that both types of disputes (online and offline) can be adequately resolved through CODR. It was pointed out that, while ODR was initially used mainly to resolve offline disputes, its application was soon extended to online disputes, and thereafter again broadened

in a new version to offline disputes, such as family disputes and personal relationships disputes. Providing a low cost and quick dispute resolution, it was shown that CODR is particularly appropriate for online communities, such as online auctions, global online job marketplaces, social networks, and virtual worlds. Moreover, the peer community element of CODR will create an atmosphere of trust and respect in the procedure amongst the members of the above-mentioned online communities.

Next, we focused on three aspects of the CODR procedure, namely, the parties, the stages, and the characteristics of CODR procedures. We found that five parties may participate in a CODR procedure, namely, two disputants, the third party, the technology, and the provider of the technology. One of the important peculiarities of CODR is related to the third party in the procedure. While in ODR the third party is an appointed neutral, the third party in CODR is essentially the crowd. Moreover, in some CODR platforms, the technology may play a major part. This scenario is beyond the scope of our research.

Pertaining to the stages, we examined four stages of CODR, namely: (1) filling the complaint, (2) notifying the respondent, (3) reaching the decision, (4) and enforcing the decision. When examining these stages, we noted that CODR procedures have certain peculiarities compared to ODR procedures. For example, if the crowd is not composed from experts (what is usually the case), the complaint in a CODR procedure should be written in such a way that it is easy to understand by the crowd.

Concerning the characteristics of CODR procedures, we used six criteria to identify the characteristics of the three types of CODR procedures (online opinion polls, online mock jury systems, and arbitration tribunals rendering self-enforceable decisions). We found that these three CODR procedures share some common characteristics, but also differ in other important aspects.

The primary claim made about our framework describing the building blocks of CODR is that it is useful for understanding the new aspects of CODR stemming from the use of crowdsourcing. The framework can be used not only for theoretical purposes but also for generating ideas when designing new CODR procedures.

By providing a framework describing the building blocks of CODR and analysing the differences between CODR and other dispute resolution schemes, we are able to answer RQ1. In summary, the answer to RQ1 reads: CODR differs from other dispute resolution procedures in using a crowd for facilitating or resolving disputes. All in all, we achieved to describe a framework that contains the building blocks of CODR. This chapter applied the framework by Malone et al. and performed a deep analysis to find the differences and analogies between CODR and other dispute resolution schemes.

In this chapter, we move from CODR to procedural fairness because the future development of CODR will be largely conditioned by the degree to which CODR complies with the requirements of procedural fairness. We mention three reasons for the development. First, procedural fairness may affect the attractiveness of CODR (cf. Grey, 1977, p. 182; Kaplow and Shawell 2009, p. 264). Second, procedural fairness may affect the acceptance of decisions of CODR (Adler, Hensler, and Nelson, 1983; McEwen and Maiman, 1984). Third, governmental institutions will not implement CODR procedures which do not comply with certain standards of procedural fairness, e.g., the EU Directive on ADR.¹

The exploration of fairness in general is complicated at the outset because there is no agreement on how fairness is to be characterized and defined. For example, for Mill (1863), an action is fair if it maximises the total benefit to society and reduces the total suffering of the society. According to Rawls (1971), an action is fair if (1) it complies with the rules of an institution which is just and (2) the person who performs the action voluntarily accepts the rules of the institution.² Nozick (2013) defines fairness as compliance with certain “natural” rights, including rights against injury by others, rights to freedom of choice and action, and rights to own private property.

The aforementioned general definitions of fairness are not suitable for assessing the fairness of CODR procedures because they do not define fairness in the context of dispute resolution procedures. In order to appropriately assess the fairness of CODR procedures, we need to distinguish between distributive and procedural fairness. The concept of distributive fairness focusses on the criteria that are used for assessing whether the outcome of a procedure is fair (cf. Welsh, 2006, p. 165), whereas the concept of procedural fairness refers to the criteria that are used for determining whether a procedure contributes to a fair outcome (cf. Lind and Tyler, 1988).

We will focus on procedural fairness only because we aim to assess the fairness of CODR procedures, and not the outcomes of those procedures. More specifically, we will focus on two types of procedural fairness, namely,

1 For the sake of brevity, the EU Directive on ADR will be referred to as the “Directive”.

2 According to Rawls, an institution can be just only if it: (1) guarantees that every individual has an equal right to basic liberties; (2) allows any individual to take “offices and positions” in the institution; and (3) permits inequalities that work to the advantage of the least advantaged in society (Rawls, 1971).

objective procedural fairness and subjective procedural fairness. The former refers to compliance of a procedure with a standard whereby the procedure is assessed by an individual or an organisation as fair or unfair, whereas the latter refers to an individual's subjective perception of fairness of a procedure (cf. Mansbridge, 1990, p. 327).

In this chapter, we will initially formulate suitable interpretations of objective procedural fairness (Section 5.1) and subjective procedural fairness (Section 5.2). Afterwards, we establish our interpretation of fairness by supplementing our interpretation of objective procedural fairness with our interpretation of subjective procedural fairness (Section 5.3). Our interpretation of procedural fairness is a direct answer to RQ2 (What is procedural fairness in the context of adjudicative dispute resolution?). At the end of the Chapter, a conclusion is drawn (Section 5.4).

5.1 OBJECTIVE PROCEDURAL FAIRNESS

As mentioned in Section 1.5, our interpretation of objective procedural fairness will be based on the the European Directive for two reasons. First, the Directive establishes a standard of fairness applying to ADR procedures. Such a standard is appropriate for examining CODR procedures, all of which are ADR procedures.³ Second, the Directive applies to the entire European Union, which has a population of about 500 million people.⁴ By making our model a fair CODR procedure that is compliant with such a widely used standard, we will increase the practical applicability of the model.

After the choice to base our interpretation of objective procedural fairness on the Directive, we need to identify the relevant provisions of the Directive, which relate to procedural fairness. We note that procedural fairness requirements can be found in Article 9 (Fairness) of the Directive as well as in Article 6 (Expertise, independence, and impartiality), Article 7 (Transparency), and Article 8 (Effectiveness). The reason is that Articles 6, 7, and 8 of the Directive contain criteria which can be used for determining whether an ADR procedure contributes to a fair outcome. Thus, a procedure ensuring the expertise, independence, and the impartiality of the third neutral party (Article 6) will more likely render a fair decision than a procedure which does not meet these three fairness criteria. Transparency requirements (Article 7) contribute to a fair outcome by enabling the accountability of the third neutral party.⁵ The requirements related to the effectiveness of the procedure (Article 8) ensure that a procedure will lead to a fair outcome

3 An overview of past and present CODR procedures is provided in Chapter 3.

4 See a statistic provided by Eurostat at <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&language=en&pcode=tps00001&tableSelection=1&footnotes=yes&labeling=labels&plugin=1> (last visited Jan. 3, 2017).

5 Regarding transparency, the U.S. Supreme Court justice Louis Brandeis stated that "Sunlight is...the best disinfectant" (Daly and Fariello, 2012, p. 112).

(cf. Hörnle, 2009, p. 6).⁶ For example, without requirements setting out procedural timeframes, a procedure may never lead to a fair outcome, let alone a fair one.

On the basis of Articles 6, 7, 8, and 9 of the Directive, we distinguish nine elements of objective procedural fairness, namely, expertise (Subsection 5.1.1), independence (Subsection 5.1.2), impartiality (Subsection 5.1.3), transparency (Subsection 5.1.4), fair hearing (Subsection 5.1.5), counterpoise (Subsection 5.1.6), ensuring a reasonable length of procedure (Subsection 5.1.7), providing reasons (Subsection 5.1.8), and voluntary participation (Subsection 5.1.9). These nine elements are examined below.

5.1.1 Expertise

Article 6(1)(a) of the Directive obliges the EU Member States to ensure that natural persons in charge of ADR possess (1) the necessary knowledge and skills in the field of alternative or judicial resolution of consumer disputes as well as (2) a general understanding of law.⁷ The Directive requires knowledge in the field of alternative or judicial resolution of consumer disputes since the resolution of consumer disputes has the following three specifics: (1) inequality of bargaining power between the consumer and the seller; (2) the amounts dealt with in such disputes are small, but large in their impact on the consumer; and (3) the consumer is usually ignorant of the technical aspects of the product (cf. Samson and McBride, 1993, p. 47). Paragraph 36 from the preamble of the Directive explains that a general understanding of law is necessary for understanding the legal implications of the dispute.

5.1.2 Independence

The term “independence” in the context of dispute resolution is usually defined as a lack of relations of the third neutral party with a party that might influence a third neutral party’s decision (cf. Rubins and Lauterburg,

6 Effectiveness means that a procedure leads to a decision or solution of a dispute (Hörnle, 2009, p. 6).

7 It should be noted that third neutral parties in traditional litigation proceedings are not always required to have dispute resolution expertise and understanding of law. For example, neither the judges nor the jurors in federal litigation cases need to have legal or other training. See *Washington v. Harper*, 494 U.S. 210 (1990); *Schweiker v. McClure* (1982) 456 U.S. 188. In the case *Parham v. J.R.*, the court even stated that non-legal professionals, such as psychologists, psychiatrists, and other health care professionals will be better equipped to resolve disputes in the field of health care than persons having a legal background. The reason is that “neither judges nor administrative hearing officers are better qualified than psychiatrists to render psychiatric judgments.” See *Parham v. J.R.*, 442 U.S. 584 (1979). Although jurors do not need to have any specific education, they need to perform the tasks with a reasonable understanding of the evidence and the legal rules. See *In re Japanese Electronic Products Antitrust Litigation*, 631 F.2d 1069 (3d Cir. 1980).

2007, p. 154).⁸ More specifically, independence relates to relationships, for instance, whether a third neutral party (a) is professionally related to one of the parties, or (b) has family or business connections to or with that party (cf. Trakman, 2007).⁹ It should be noted that the concept of independence is a factual concept, which means absence of an objectively ascertainable conflict of interest (cf. Hörnle, 2009, p. 114). An example of lack of independence is provided in the U.S. Supreme Court case *Cheney v. U.S. Dist. Court for Dist. Of Columbia*.¹⁰ In that case, a judge from the U.S. Supreme Court was requested to recuse himself from hearing of a case involving the Vice President of the United States because the judge accepted a free ride on the Vice President's airline (Beermann, 2010, p. 125).

Article 6(1) of the Directive obliges the EU Member States to ensure that the natural persons in charge of ADR are independent. The contents of paragraphs (b), (c), (d), and (e) of Article 6(1) of the Directive are specific safeguards which should be implemented in the national laws of the EU Member States in order to ensure the independence of the third neutral parties.

Paragraph (b) and paragraph (d) ensure the personal independence of the third neutral party, i.e., they guarantee that safeguards are built into the position of the third neutral party regarding duration of appointment, remuneration, and dismissal of the third neutral party (cf. De Lange and Mevis, 2006, pp. 333-334). More specifically, paragraph (b) requires that the third neutral party is appointed for a term of sufficient duration for ensuring the independence of their actions and are not liable to be relieved from their duties without a just cause. Paragraph (d) states that the third neutral party should be remunerated in a way that is not linked to the outcome of the procedure.

Paragraph (c) and paragraph (e) ensure the functional independence of the third neutral party, i.e., the third neutral party should at all times feel free that he can freely give his judgements (cf. De Lange and Mevis, 2006, p. 334). Paragraph (c) guarantees functional independence by requiring that the third neutral party should not be subject to instructions from either par-

8 The term "independence" should be clearly distinguished from the term "conflict of interest". While the former relates to lack of relations, the latter refers to a confrontation between professional and private interests. Transparency International, a non-governmental organisation based in Germany, defines the term "conflict of interest" as follows: "Situation where an individual or the entity for which they work, whether a government, business, media outlet or civil society organisation, is confronted with choosing between the duties and demands of their position and their own private interests." See https://www.transparency.org/glossary/term/conflict_of_interests (last visited Jan. 3, 2017).

9 The requirement that the third neutral party should be independent is an element of the right to fair trial set forth in Article 6 of the ECHR. The ECtHR differentiates between three types of independence, namely, (1) independence from the executive power, (2) independence from the parliament, and (3) independence from the parties. See "Guide on Article 6 of the European Convention on Human Rights", the ECtHR, 2014. Available at http://www.echr.coe.int/documents/guide_art_6_criminal_eng.pdf (last visited Jan. 3, 2017).

10 See *Cheney v. U.S. Dist. Court for Dist. Of Columbia*, 542 U.S. 367 (2004).

ty or their representatives. Paragraph (e) obliges the third neutral party to disclose to the ADR entity any circumstances, which may affect third neutral party's independence.

5.1.3 Impartiality

The impartiality is an abstract concept, which, in its essence, is a requirement referring to the judge's state of mind (cf. Hörnle, 2009, p. 113).¹¹ For instance, a third neutral party will not be impartial if he has an inclination for or against a party, takes into account irrelevant considerations or acts either out of self-interest or prejudice. It should be noted that establishing impartiality requires an examination of the subjective state of mind of the mediator and, therefore, causes obvious problems of determining evidence.¹² That is why a commonly used approach to ensure impartiality of third neutral parties is obliging them to disclose any circumstances that may affect their impartiality. Such an obligation is vested in Article 6(1)(e) of the Directive.

It should be clarified that impartiality does not require "absence" of prior opinions on a given case (cf. Megret, 2014, p. 120). The third neutral parties often have preliminary opinions on the issues they have to decide. Impartiality should be seen as "an awareness, an alertness to inevitable existence of one's biases" (cf. Megret, 2014, p. 120).

5.1.4 Transparency

Transparency refers to a dispute resolution environment where a dispute resolution process is understandable and, if necessary, possible to replicate (cf. Zeleznikow, 2011, p. 8).¹³ The Directive ensures transparency by imposing two obligations to ADR entities, namely, (1) an obligation to make publicly available specific information about their ADR procedures (see Section 7(1) of the Directive) and (2) an obligation to publish annual reports containing statistical information about the operation of their ODR procedures (see Section 7(2) of the Directive).

11 The requirement that the third neutral party should be impartial is an element of the right to fair trial vested in Article 6 of the European Convention on Human Rights (ECHR). See "Guide on Article 6 of the European Convention on Human Rights", the ECtHR, 2014. Available at http://www.echr.coe.int/documents/guide_art_6_criminal_eng.pdf (last visited Jan. 3, 2017).

12 To demonstrate the significance of these problems, it is sufficient to note that a challenge of a judge based on impartiality has never been successful under English law (Hörnle, 2009, p. 113). In comparison, English judges have been challenged on the basis of their lack of independence. For example, an English judge was recused because he was a lessor of the plaintiff (see Hammond, 2009, p. 13).

13 Transparency may exist not only in dispute resolution procedures in which disputes are resolved by third parties, but also in negotiation support systems (Zeleznikow and Belucci, 2012).

Regarding the first obligation, ADR entities are obliged to make publicly available on their websites, on a durable medium upon request, and by any other means they consider appropriate, clear and easily understandable information about:

- (1) their contact details;
- (2) the fact that ADR entities are listed as entities falling within the scope of the Directive and complying with the requirements of the Directive;
- (3) the third neutral parties as well as the method and the term of their appointment;¹⁴
- (4) the expertise, impartiality, and independence of the third neutral parties if they are appointed exclusively by the trader;
- (5) their membership in networks of ADR entities (if applicable);
- (6) the types of disputes the ADR entities are competent to deal with, including any applicable thresholds;
- (7) the rules of their ADR procedures as well as the grounds on which ADR entity may refuse to deal with a dispute in accordance with Article 5(4) of the Directive¹⁵;
- (8) the languages in which complaints can be submitted to the ADR entity and in which the ADR procedure is conducted;
- (9) the types of rules the ADR entity may use as a basis for the dispute resolution;
- (10) any preliminary requirements that the parties must meet before the commencement of the ADR procedure;
- (11) whether the parties can withdraw from the procedure;
- (12) the costs of the ADR procedure and rules on awarding costs;
- (13) the average length of the ADR procedure;
- (14) the legal effect of the outcome of the ADR procedure; and
- (15) information about the enforceability of the ADR decision (if relevant).

Pertaining to the second obligation, the ADR entities are obliged to make publicly available on their websites, on a durable medium upon request, and by any other means they consider appropriate, annual reports containing the following information:

14 The requirement for publication of the names of the jurors can be traced back to Roman law. The Roman *Lex Repetundarum* required the publication of the names of jurors in judicial proceedings.

15 Article 5(4) of the Directive states that the EU Member States may permit ADR entities to maintain and introduce procedural rules that allow them to refuse to deal with a given dispute on the grounds that: (1) the consumer did not attempt to contact the trader concerned in order to discuss his complaint and seek, as a first step, to resolve the matter directly with the trader; (2) the dispute is frivolous or vexatious; (3) the dispute is being or has previously been considered by ADR entity or by a court; (4) the value of the claim falls below or above a pre-specified monetary threshold; (5) the consumer has not submitted the complaint to the ADR entity within a pre-specified time limit, which shall not be set at less than one year from the date upon which the consumer submitted the complaint to the trader; (6) dealing with such a type of dispute would otherwise seriously impair the effective operation of the ADR entity.

- (1) the number of disputes received and the types of complaints to which they related;
- (2) any systematic or significant problems that occur frequently and lead to disputes between consumers and traders;
- (3) the rate of disputes the ADR entity has refused to deal with and the percentage share of the types of grounds for such refusal as referred to Article 5(4) of the Directive;
- (4) the percentage shares of solutions proposed or imposed in favour of the consumer and in favour of the trader (this requirement applies only if the third neutral party is employed or remunerated by the trader);
- (5) the percentage share of ADR procedures which were discontinued and the reasons for the discontinuation (if known);
- (6) the average dispute resolution time;
- (7) the rate of compliance with the outcomes of the ADR procedures; and
- (8) cooperation of ADR entities within networks of ADR entities which facilitate the resolution of cross-border disputes.

5.1.5 Fair hearing

Fair hearing means that each party should have an equal opportunity to present evidence and law (see Hörnle, 2009, p. 13).¹⁶ Fair hearing consists of two sub-elements, namely, (A) ensuring that each party participates in the dispute resolution process and (B) ensuring that each party can present its case and rebut the case of the opponent. These two sub-elements are examined in more detail below.

A: Ensuring that each party participates in the dispute resolution process

The right to participation in the dispute resolution process requires the parties to receive a notice informing them about the commencement of the dispute resolution process (cf. Grando, 2009, p. 14). Article 8(d) of the Directive ensures the right to participation by obliging the ADR entity to notify the parties to the dispute as soon as it has received all documents containing the relevant information relating to the complaint.

B: Ensuring that each party can present its case and rebut the case of the opponent

Article 9(1)(a) of the Directive guarantees that each party can present its case and rebut the case of the opponent by stating that the disputants should have the possibility, within a reasonable period of time, (1) of expressing their point of view, (2) of being provided with the submissions of the other party and experts involved in the case, (3) of being able to comment on the aforementioned submissions.

16 The right of fair hearing constitutes an element of the right to fair trial stipulated in Article 6 of the ECHR. See "Guide on Article 6 of the European Convention on Human Rights", the ECtHR, 2014. Available at http://www.echr.coe.int/documents/guide_art_6_criminal_eng.pdf (last visited Jan. 3, 2017).

5.1.6 Counterpoise

The element of counterpoise¹⁷ takes into account obstacles to effective participation, which are not inherent to the procedure, but arise from a party's inability to take part in the procedure on an equal footing (cf. Hörnle, 2009, p. 7).¹⁸ This element deals with preexisting power imbalances between the parties and consists of measures to reduce them.¹⁹ For instance, if one party has no financial resources to file a case, he will be less equipped for a participation in a dispute resolution procedure than the other party (cf. Hörnle, 2009, p. 7).²⁰ Other examples of power imbalances include the inability of one party to understand the case or actively participate in the proceedings.²¹ The element of counterpoise is guaranteed in most domestic legal orders (cf. Bohlander, 2007, p. 13).

In Article 8(b), Article 8(c), and Article 9(1)(b), the Directive establishes some counterpoise to preexisting imbalances in the financial status of the disputants. In more detail, Article 8(b) requires ADR entities to ensure that the disputants are not obliged to retain a lawyer or a legal advisor, but they may seek legal or other advice at any stage of the procedure. Article 9(1)(b)

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- 17 The element of counterpoise corresponds to the concept of equality of arms developed by the ECtHR. According to the ECtHR, equality of arms requires that each disputant be given a reasonable opportunity to present his case under conditions that do not put him at a substantial disadvantage in respect to his opponent. See the following ECtHR cases: *Bulut v. Austria* (1996) 24 EHRR 84; *Foucher v. France* (1997) 25 EHRR 234; and *Klimentyev v. Russia* (2009) 49 EHRR 14. The equality of arms is an inherent feature of the right to fair trial enshrined in Article 6 of the ECHR. See "Guide on Article 6 of the European Convention on Human Rights", the ECtHR, 2014. Available at http://www.echr.coe.int/documents/guide_art_6_criminal_eng.pdf (last visited Jan. 3, 2017). The term "equality of arms" is criticised because the use of the word "arms" implies that the disputants are "combatants" who are "forced to comply with the procedural rights equilibrium" (Toma, 2016, p. 3).
- 18 Power imbalances are at stake if one party has significantly more power than the other. Hörnle distinguishes three factors that can lead to a power imbalance. They are (i) resources, (ii) whether a party is a repeat player, and (iii) vulnerability. Resources, such as financial resources, human resources, legal know-how, access to internal or external legal advice, are an obvious factor that can lead to power imbalance. The second factor is the 'Repeat player' effect and power, which means that parties who have been regularly involved in similar types of disputes have more power than 'one-shotters'. The third factor is the relative importance of the case for each party (vulnerability). See Hörnle, 2009, pp. 29-31.
- 19 The element of counterpoise is a direct implementation of the principle of redistributive justice as developed by Rawls (1971). According to Rawls, each person in a society should be entitled to the most extensive liberty that is comparative with a similar degree of liberty being enjoyed by others (Rawls, 1971). Hence, redistributive justice requires that a socially disadvantaged disputant who has inadequate resources must not be placed at substantial disadvantage vis-à-vis their opponents.
- 20 Governments can address such power imbalances by providing legal aid to financially disadvantaged disputants (see Hörnle, 2009, p. 15). Legal aid schemes use public funds to pay the legal costs of low-income disputants (Schiavetta, 2008, p. 371).
- 21 See 'European judicial systems - Edition 2014 (2012 data) - Efficiency and quality of justice', 2014, p. 453.

obliges ADR entities to inform the disputants about the rights provided by Article 8(b) of the Directive. Article 8(c) requires ADR entities to ensure that the ADR procedure is free of charge or available at a nominal fee for consumers. Article 8(b), Article 8(c), and Article 9(1)(b) make sure that disputants will be able to participate in the ADR procedure, irrespective of their financial situation.

Article 8(a) of the Directive establishes some counterpoise to preexisting imbalances in the computer skills of the disputants. In particular, Article 8(a) states that the ADR procedure should be available and easily accessible online and offline to disputants, irrespective of where they are. Thus, Article 8(a) makes the ADR procedures governed by the Directive accessible to all parties, irrespective of their computer skills.

5.1.7 Ensuring a reasonable length of procedure

In *Hentrich v. France*, the ECtHR stated that excessive delay is a breach of the right to a fair trial contained in Article 6(1) of the ECHR.²² The court in the English case *R v Bow Street Stipendiary Magistrate ex parte Cherry* even found that procedural delays may constitute abuse of a process.²³ The court stated as follows: “We see no warrant for not following ample precedent, now well set, for the proposition that mere delay which gives rise to prejudice and unfairness may by itself amount to an abuse of the process.”

In order to avoid excessive delays, Article 8(e) of the Directive obliges the ADR entities to make available the outcome of ADR procedures within a period of 90 calendar days from the date on which the ADR entity has received the complete complaint file. Nevertheless, in the case of highly complex disputes, the ADR entity in charge may, at its own discretion, extend the time period of 90 calendar days.

5.1.8 Providing reasons

The provision of reasons has at least three goals, namely, (1) showing respect to the person affected by a decision, (2) promoting good outcomes, and (3) facilitating the appeal of decisions (cf. Endicott, 2011, pp. 189-190).²⁴ In relation to the first goal, by providing reasons for a decision, a third neutral party shows respect to the person affected by a decision because the third neutral party treats that person as someone to whom an account must be given. Pertaining to the second goal, the provision of reasons promotes good outcomes because it focuses the mind of the third neutral party on the

22 *Hentrich v. France* (1994) 18 EHRR 440.

23 See *R v Bow Street Stipendiary Magistrate ex parte Cherry* (1990) 91 Cr App R 283.

24 The right to fair trial stated in Article 6 of the ECHR includes the right to receive sufficient reasons for decisions. See *H v. Belgium* (1987) 10 EHRR 339. The reasons must provide the parties with the opportunities to make effective use of their rights of appeal. See *Suominen v. Finland* (2003), ECHR 330.

explanation of decisions. As for the third goal, it should be noted that the reasons allow the disputants to find flaws in the decision-making process and appeal the decision.

Article 9(c) of the Directive requires ADR entities to (1) notify the disputants of the outcome of their ADR procedures in writing or on a durable medium and (2) give the disputants a statement of the grounds on which the outcome is based. Although the Directive does not specifically mention “reasons”, the word “grounds” as used in Article 9(c) has the same meaning as the word “reasons”.

The Directive does not clarify whether the reasons should be lengthy or brief. The use of lengthy reasons is typical for common law judges. For instance, the reasons provided by English judges contain a lengthy disclosure of the arguments of the judges, examples, and interpretation of previous court decisions (Steiner, 2010, p. 139; Siems, 2014, p. 55). In contrast, French judges usually support their judgements with short reasons (cf. Steiner, 2010, p. 13).

5.1.9 Voluntary participation

The voluntary participation is an important characteristic of ADR procedures (cf. Bühring-Uhle, Kirchhoff, Scherer, 2006, p. 229). In principle, an ADR procedure cannot resolve a dispute without the previous agreement of the parties. Article 9(2)(a), 9(2)(b), Article 9(2)(c), and Article 9(2)(d) guarantee the voluntary participation in ADR procedures.

Article 9(2)(a) obliges ADR entities (1) to provide the disputants the right to withdraw from the ADR procedure at any stage if they are dissatisfied with its performance or the operation and (2) to inform the disputants about that right.²⁵

Article 9(2)(b) further guarantees the voluntary participation of the disputants by requiring ADR entities to inform them: (1) about their choice as to whether or not to agree to or follow the proposed solution; (2) that the participation in the procedure is without prejudice to the possibility of seeking redress through court procedures; and (3) the proposed solution may be different from the outcome of court proceedings.

Article 9(2)(c) imposes obligation on ADR entities to ensure that the disputants are aware of the legal effect of agreeing to or following a proposed solution. Pursuant to Article 9(2)(d), before agreeing to or following a proposed solution, the disputants using ADR procedures should be allowed a reasonable period of time to reflect.

It should be noted that, pursuant to Article 9(1)(3) of the Directive, consumers always have a right to voluntary participation. The Directive provides traders with a right to voluntary participation, but if the national laws state otherwise, the national laws shall prevail.

25 However, if the national laws require the mandatory participation of a trader in the ADR procedure, Article 9(2)(a) shall apply to the consumer only.

5.2 SUBJECTIVE PROCEDURAL FAIRNESS

Subjective procedural fairness is mainly of interest to social psychologists who analyse the response of participants and observers to particular procedures (cf. Röhl, 1997, p. 4). Subjective procedural fairness may include various elements, including the moral view and the cultural belonging of the person evaluating the fairness of a procedure. Thus, what one person deems to be fair, another person may deem to be unfair. At least two studies indicate that cultural belonging has an impact on subjective procedural fairness (cf. Brockner et al., 2001; Steiner and Gilliland, 1996). The first study found that the importance of voice (i.e., the opportunity to express an opinion) in determining the perception of subjective procedural fairness may vary depending on the cultural norms (cf. Brockner et al., 2001). The second study found that cultural differences may affect perceptions of subjective procedural fairness through their impact on the preferred approaches of information processing (cf. Steiner and Gilliland, 1996). For example, American subjects prefer to base their conclusions on subjective procedural fairness of the scientific process and empirical data, whereas French subjects rely more heavily on argumentation and reasoning (cf. Steiner and Gilliland, 1996).

There are three views on the question why certain factors can affect the perceptions of subjective procedural fairness, namely, (1) a narrow consequentialist view, (2) a pure proceduralist view, and (3) a non-consequentialist view. The narrow consequentialist view is that certain factors affect perceptions of subjective procedural fairness because they promote better outcomes. The pure proceduralist view is that certain factors affect subjective procedural fairness because they have inherent value in their own right. The non-consequentialist view is that certain factors promote factors other than consequences that individuals value (cf. Tsuchiya, Wailoo, and Edlin, 2007, p. 6). The importance of any factor affecting the perceptions of subjective procedural fairness may be justified by using each of these three views.

A literature review on procedural subjective fairness reveals the following nine elements of procedural subjective fairness: impartiality, independence, fair hearing, process control, decision control, consistency, accuracy, correctability, ethicality, and transparency (cf. Musante, Gilbert, Thibaut, 1983; Adler, Hensler, and Nelson, 1983; Lind, Lissak, Conlon, 1983; Tyler, Rasinski, and Spodick, 1985; Tyler, Rasinski and Spodick, 1985; Greenberg, 1986; Lind and Tyler, 1988, p. 108; Tyler, 1988; Fryxell and Gordon, 1989; Folger and Konovsky, 1989; Brockner et al, 1994, p. 406; Levy and Williams, 1998; Tsuchiya, Wailoo, Edlin 2007; Ivkovich and Hagan, 2011, p. 75; Brockner and Wiesenfeld, 2013, p. 527). These nine elements have been identified on the basis of empirical studies assessing the perceptions of procedural fairness of various types of procedures, including, but not limited to, dispute resolution procedures. Most of the empirical studies were conducted by using focus groups and surveys. It should be pointed out that the importance of the elements of subjective procedural fairness may vary across the examined procedures (cf. Gilliland, 2001, p. 40).

The following four elements of subjective procedural fairness overlap with our elements of objective procedural fairness: (1) impartiality, (2) independence, (3) fair hearing, and (4) transparency. Empirical studies indicate that the requirements of due process (i.e., impartiality, independence, and fair hearing) are major determinants of procedural fairness judgements (see, e.g., Lind and Tyler, 1988; Brockner and Wiesenfeld, 2013).²⁶ The reason is that due process is based on instincts of fairness, which become embedded in human's nature through a process of social and biological evolution (cf. Sheffrin, 2013, p. 31). Such instincts include the desire for respectable treatment and the ability to engage and participate in the process of generating outcomes (cf. Sheffrin, 2013, p. 31). Tyler and Lind (2002) explained the logic behind these instincts by stating that they reduce the risks of maltreatment and a variety of mental, emotional, and physical dangers. The importance of transparency for perceptions of subjective procedural fairness can be explained with the role of transparency for assessing subjective procedural fairness of a procedure (cf. Gianetti, 2015, p. 137). People must be aware of a procedure in order to judge its fairness (cf. Licht, 2011, p. 4).

Since the purpose of this Section is to supplement our interpretation of objective procedural fairness, we will not re-examine the elements of subjective procedural fairness, which overlap with the elements of objective procedural fairness. Below, we will examine the following elements of subjective procedural fairness: process control (Section 5.2.1), decision control (Section 5.2.2), consistency (Section 5.2.3), accuracy (Section 5.2.4), correctability (Section 5.2.5), and ethicality (Section 5.2.6).

5.2.1 Process control

Process control refers to the control over the development and selection of information that will constitute the basis for making a decision (cf. Thibaut and Walker, 1975). Although process control may overlap with the right to

26 Due process refers to fundamental procedural legal safeguards of which every citizen has an absolute right when a court or a state intends to take a decision which can affect any right of that citizen (cf. Johnson, 2005, p. 87). The notion of due process can be traced back to early common law (cf. Galligan, 2004, p. 73). In the English legal tradition, the term "due process" is referred to as "natural justice" (cf. Hörnle, 2009, p. 5). The principle of natural justice originates in Article 39 of Magna Carta, whereby the King promised not to encroach the liberties of the English citizens unless the breach is in accordance with a lawful judgement of a jury trial or the law of the land (cf. Harris, 2015, p. 41). A fully developed version of the principle of natural justice is expressed in the early seventeenth century as a collective description of conditions by which the Court of the King's Bench assessed whether it is entitled to review the procedure by which a legal authority was exercised (see Gray, 1999, p. 573). In the United States of America, the concept of natural justice also exists. It is recognized as a constitutional standard known as "due process". Due process is implemented in the Fifth and Fourteenth amendments of the U.S. Constitution. These two amendments compel state and federal governments to follow the aforementioned conditions in order to regulate governmental intrusions in individual rights and to mediate disputes among citizens and the State (cf. Paris, 2010, p. 118).

be heard, there is a significant difference. While process control relates to the presentation of information that will constitute the basis for making a decision, the right to be heard relates to presenting one's view. For example, according to Bulgarian law, recordings from video cameras are not considered as an evidence (cf. Alexandrov, 2015). This may have an impact on the process control of the disputants, but does not have an impact on their right to be heard as the disputants are allowed to present to the court any recordings from video cameras.

On the basis of a literature review of 107 scientific materials (in particular, articles and books) related to procedural fairness, Tsuchiya, Wailoo, and Edlin (2007) found out that 46 out of 107 examined papers empirically investigate the impact of process control on the perceptions of subjective procedural fairness.²⁷ In total, 44 of these 46 papers contain evidence indicating that the process control affects perceptions of procedural subjective fairness.

Scientific experiments conducted in court-room settings indicate that disputants prefer that most of the process control over the dispute resolution is vested in them and not in a third party (cf. Thibaut and Walker, 1975). Such a preference was reported not only by residents of England and the United States where the judges have weak process control, but also by residents of France and Germany where the judges have strong process control (cf. Thibaut and Walker, 1975). This clearly indicates that the strong process control strengthens the perceptions of subjective procedural fairness irrespective whether the persons assessing the subjective procedural fairness are based in a common law country or a civil law country.²⁸

Such heightened perceptions are not solely caused by disputant's thinking that a strong process control will increase the likelihood of obtaining fair and beneficial outcomes. Empirical studies have shown that process control affects subjective procedural fairness even when disputants did not consider their process control to be influential on the final decision (cf. Cutler, 2007, p. 626). This clearly indicates that the impact of process control on perceptions of subjective procedural fairness cannot be explained by the narrow consequentialist view which is discussed above.

5.2.2 Decision control

Decision control refers to the extent to which the parties are free to reject or accept a decision rendered by a third party (cf. Wemmers, 1996, p. 69). Compared with process control, the decision control affects the perceptions of subjective procedural fairness to a lower extent (cf. Tyler, Rasinski, and Spodick, 1985). The reason is that, when people use third parties (e.g.,

27 The examined papers were identified on the basis of: (i) keyword searches of electronic databases; (ii) hand searches of specific academic journals; and (iii) hand searches of papers by specific authors.

28 The judges of common law countries have a weak process control, whereas the judges of civil law countries have a strong process control (cf. Steiner, 2010, p. 278).

judges and arbitrators) to resolve their disputes, they transfer their decision control to the third party (cf. Tyler and Blader, 2013, p. 90). In negotiation proceedings, where no third party is involved, disputants keep complete decision control. For example, a disputant in a negotiation proceeding has a full discretion to decide on whether or not to accept a settlement offer for the amount of USD 300.

On the basis of the information in the preceding paragraph, it can be presumed that dispute resolution proceedings which provide the disputants with a high degree of decision control (e.g., mediation proceedings) should be viewed as fairer than dispute resolution proceedings with low decision control (e.g., adjudication). Three empirical studies support this presumption. The first study found that outcomes reached by the disputants (e.g., mediation settlement) are perceived as fairer than outcomes imposed by a third party (cf. Conlon, Moon, and Ng, 2002). The second study concluded that disputants who reach a settlement are likely to be more satisfied with the fairness aspect of the process compared with those who “lost” in adjudicative proceedings (Condliffe, 2012, p. 157). The third study revealed that the participants in the study prefer Med/Arb (i.e., mediation followed by arbitration) processes than Arb/Med (i.e., arbitration followed by mediation processes) (Condliffe and Zeleznikow, 2014).

5.2.3 Consistency

Consistency refers to the consistent application of a procedure across persons and across time (cf. Leventhal, 1980). It is worth mentioning that Tsuchiya, Wailoo, and Edlin (2007) found out that eight out of the examined 107 scientific publications state that consistency is a factor affecting subjective procedural fairness and five of them provided empirical support for this statement.²⁹ The authors conducted their own empirical study which discovered that consistency was the second most important factor affecting subjective procedural fairness.

Consistency was also found to be an important factor affecting subjective procedural fairness in the studies by Greenberg (1986), Barrett-Howard and Tyler (1986), Sheppard and Lewicki (1987). Greenberg (1986) found that the consistent application of standards across people is one of the most important factors affecting the perceptions of subjective procedural fairness in performance evaluations. Barrett-Howard and Tyler (1986) found out that, in business environment, decision-maker’s consistency across people seriously affects perceptions of subjective procedural fairness. Sheppard and Lewicki (1987) found that managers perceive decision-making consistency

²⁹ The reason for the low number of publications mentioning consistency can be the fact that the evaluation of consistency cannot be based on information about the application of a single procedure. The evaluation should be based on information about the application of a number of procedures which is not always available to the disputants.

in applying rules across people and settings as an important factor affecting subjective procedural fairness in the workplace.

The aforementioned empirical studies do not correspond to the findings of a study conducted by Lind and Tyler (cf. Lind and Tyler, 1988, p. 108). Lind and Tyler found out that consistency is not one of the most important factors affecting perceptions of subjective procedural fairness. The reason are that the factor representation (a factor including both process and decision control), ethicality, and accuracy were found to be more important than consistency. The differences between the results of the empirical study conducted by Lind and Tyler and the other empirical studies mentioned above are perhaps caused by the differences in the examined procedures. While Lind and Tyler examined dispute resolution procedures, the other studies refer to procedures aiming to decide how to best use scarce health care resources (cf. Tsuchiya, Wailoo, and Edlin, 2007), procedures for evaluating performance (cf. Greenberg, 1986) and business decision-making procedures (cf. Barrett-Howard and Tyler, 1986; Lewicki, 1987). As it was pointed out in the beginning of this chapter, the importance of the factors affecting subjective procedural fairness may vary depending on the examined procedures.

5.2.4 Accuracy

Procedures based on inaccurate information are viewed by the participants in the procedures as unfair (cf. Tsuchiya, Wailoo, and Edlin, 2007, p. 30). For example, an allocation procedure which requires the participants in the procedure to keep full and accurate records of their contributions will be assessed as fairer than an allocation procedure which does not require the participants to keep such records. As the information provided by the disputants may constitute an accurate information, the right to be heard and process control may overlap with accuracy (cf. Tsuchiya, Wailoo, and Edlin, 2007, p. 9).

The aforementioned study by Tsuchiya, Wailoo, and Edlin (2007) found that accuracy was discussed in twelve out of 107 papers related to procedural fairness. Eleven of those twelve papers provided empirical support indicating that accuracy affects procedural fairness. Furthermore, the empirical study conducted by Tsuchiya, Wailoo, and Edlin (2007) found out that accuracy was the most important element of procedural fairness. Lind and Tyler (1988, p. 108) found that the accuracy is less important than the representation (i.e., both process and decision control) and ethicality. As it has been noted in Subsection 5.2.3, the difference between the findings of Tsuchiya, Wailoo, and Edlin (2007) and Lind and Tyler (1988, p. 108) is probably caused by the differences in the examined procedures. The procedures examined by Tsuchiya, Wailoo, and Edlin (2007) relate to procedures aiming to decide how to best use scarce health care resources, whereas Lind and Tyler (1988, p. 108) examined dispute resolution procedures.

5.2.5 Correctability

Correctability of a decision means the opportunity to correct the decision. For instance, such an opportunity can be provided by appeal procedures.³⁰ Leventhal (1980) notes that, in order to be viewed as fair by the disputants, the appeal procedures should comply with the other factors affecting procedural justice (except correctability). The lack of correctability of a decision affects the perceptions of procedural fairness in two ways (cf. Renning, 1997, p. 225). First, the lack of correctability negatively affects the perceptions of procedural fairness because the correctability has an inherent value by its own. Second, the lack of correctability negatively affects the perceptions of subjective procedural fairness because it fosters inconsistent application of a procedure. As it was discussed above, an inconsistent procedure is viewed as unfair by the disputants.

The study by Tsuchiya, Wailoo, and Edlin (2007) found that correctability was discussed in five of the examined 107 studies. Four of these studies provided empirical support demonstrating that the correctability affects procedural fairness. The little scientific attention received by the correctability is probably caused by the fact that it only slightly affects the perceptions of procedural fairness. In this regard, Lind and Tyler (1988, p. 108) found that correctability was the weakest factor affecting procedural fairness, whereas Tsuchiya, Wailoo, and Edlin (2007) listed correctability as the second weakest factor (transparency was found to be the weakest).

Although Article 8(2)(b)(ii) of the Directive on ADR states that the participation in ADR procedures should not preclude the possibility of seeking redress through court proceedings, the Directive on ADR does not oblige ADR entities to make available appeal ADR procedures. Since court proceedings can be expensive and complex, the element of correctability may not be satisfied by the safeguard vested in Article 8(2)(b)(ii).

5.2.6 Ethicality

Ethicality refers to the extent to which a procedure conforms to personal ethical standards (cf. Lind and Tyler, 1988, p. 132).³¹ For example, if a third neutral party does not treat the disputants with dignity and respect, the disputants may consider the procedure unfair. Lind and Tyler (1988, p. 108) found ethicality to be the second most important factor affecting procedural

30 Settlement agreements reached through ADR procedures may not be appealed as they are not decisions, but contractual agreements to which both parties agree. For example, agreements reached as a result of plea bargaining may not be subject to appeal (see Mackenzie, Vincent, and Zeleznikow, 2015).

31 Klaming (2012, p. 148) considers ethicality to be one of the indicators of the quality of dispute resolution proceedings. According to Klaming (2012, p. 148), persons willing to measure the ethicality of dispute resolution proceedings must ask the disputants the following question: "...was the process ethical and in line with the moral standards of society?"

fairness after representation (a factor including both process and decision control).³²

It should be noted that the content of ethicality differs across the globe (cf. Jackson, 2011, p. 11). What is considered to be ethical in one society, may be considered unethical in another society.³³ For example, German managers rate the giving of a business gift as a more acceptable act than American managers (cf. Jackson and Artola, 1997). Up until the present moment, there is no absolute global ethical standard which is independent of the cultural context (cf. Shaw, 2000, p. 12). However, many societies may share common moral values, e.g., the Member States of the European Union share common moral values (Jackson and Sørensen, 2007, p. 269).

There are three theories on the impact of globalisation on the ethical standards around the world, namely, convergence, divergence, and crossvergence (cf. Jackson, 2011, pp. 24-25). According to the theory of convergence, all societies follow the same trajectory and, therefore, they will at some point have the same ethical standards. For example, most societies embrace the ethical standards related to industrial capitalism. Pursuant to the theory of divergence, the ethical standards will continue to differ despite globalising forces. The theory of crossvergence states that new ethical standards will appear as a result of the collision between the current ethical standards and the globalisation. The designers of CODR procedures can implement the three theories by ensuring that their procedures comply, to the maximum possible extent, with global, local, and emerging ethical standards.

5.3 OUR INTERPRETATION OF PROCEDURAL FAIRNESS

Below, we present our interpretation of procedural fairness, which constitutes a direct answer to RQ2 (What is procedural fairness in the context of adjudicative dispute resolution?). The interpretation is formulated by adding the six elements of subjective procedural fairness, which do not overlap with the elements of objective procedural fairness, to the nine elements of

32 Ethicality has a strong influence on perceptions of procedural fairness because it allows disputants to evaluate procedural fairness on the basis of their personal ethical standards, without having information about the procedure which is necessary for evaluating other elements of procedural fairness (cf. Bazerman, 2005, p. 458).

33 Liu, Volcic, and Gallois (2014, pp. 119-121) proposed four ethical principles which can be used to facilitate intercultural communication, namely, (1) mutuality, (2) non-judgementalism, (3) honesty, and (4) respect. The first principle refers to acquiring understanding of the perspective of the other party. The second principle relates to the willingness to recognise and appreciate intercultural differences. The third principle means that participants in intercultural communication should see things as they are rather than they would like them to be. The fourth principle involves sensitivity to and acknowledgment of the needs of the other party. The four principles are not supported by empirical evidence demonstrating that they can actually facilitate intercultural communications.

objective procedural fairness. It can be used not only for evaluating fairness of CODR procedures, but also for evaluating fairness of ODR and other ADR procedures. However, the elements of the interpretation were selected with the assumed relevance for CODR in mind. The fifteen elements of our interpretation of procedural fairness are listed below (A-O) and briefly explained.

A: Expertise

The third neutral parties should have (1) the necessary knowledge and skills in the field of alternative or judicial resolution of consumer disputes as well as (2) a general understanding of law.

B: Independence

The third neutral parties should have personal and functional independence. Personal independence of the third neutral party refers to guarantees that are built into the position of the third neutral party regarding duration of appointment, pay, and dismissal of the third neutral party. Functional independence means that the third neutral party should at all times feel free that he can freely give his judgements.

C: Impartiality

The third neutral party must not have any internal prejudices, prejudgement or predisposition towards some parties or some of the elements of the subject matter of the dispute.

D: Transparency

The dispute resolution process should be understandable and, if necessary, possible to replicate.

E: Fair Hearing

The disputants should be provided with (1) a notice informing them about the commencement of the dispute resolution process and (2) an opportunity to present their cases and rebut the cases of their opponents.

F: Counterpoise

Preexisting imbalances in the financial status of the parties and the computer skills of the disputants should be neutralised.

G: Ensuring a reasonable length of procedure

The outcome of the dispute resolution procedure should be available within a period of 90 calendar days from the date on which the provider of dispute resolution services has received the complete complaint file. Nevertheless, in the case of highly complex disputes, the provider of dispute resolution services in charge may, at its own discretion, extend the 90 calendar days' time period.

H: Providing reasons

The provider of dispute resolution services must give the disputants a statement of the grounds on which the outcome is based.³⁴

I: Voluntary participation

The participation of the disputants in the dispute resolution procedure should be voluntary. However, national laws may require mandatory participation on traders.

J: Process control

The increase of the control over the development and selection of information that will constitute the basis for making a decision strengthens the perceptions of procedural fairness.

K: Decision control

The increase of the extent to which the participants in a procedure can reject or accept a decision rendered by that procedure strengthens the perceptions of procedural fairness.

L: Consistency

The consistent application of a procedure across persons and across time strengthens the perceptions of procedural fairness.

M: Accuracy

Individuals view procedures based on accurate information as more fair than the procedures based on inaccurate information.

N: Correctability

The opportunity to correct a decision strengthens the perceptions of fairness of the procedure which was used for making the decision.

O: Ethicality

The increase of the extent to which a procedure conforms to personal standards of ethics and morality increases the extent of the perceived fairness of the procedure.

5.4 CHAPTER SUMMARY

In this chapter, we first identified nine elements of objective procedural fairness on the basis of the Directive. These elements are as follows: expertise, independence, impartiality, transparency, fair hearing, counterpoise, ensuring a reasonable length of procedure, providing reasons, and voluntary par-

34 It should be noted that this element is not relevant to facilitative processes (e.g., mediation) in which the third neutral party does not render decisions.

ticipation. Also, we identified six elements of subjective procedural fairness, which do not overlap with the nine elements of objective procedural fairness. These six elements are process control, decision control, consistency, accuracy, correctability, and ethicality. Afterwards, we explained our interpretation of procedural fairness which consists of (1) the nine elements of objective procedural fairness and (2) the six elements of subjective procedural fairness which do not overlap with the elements of objective procedural fairness. Thus, the total number of elements of our interpretation of procedural fairness is fifteen.

In this chapter, we provide an answer to RQ3 (Are the past and present CODR procedures fair?) by investigating whether three CODR procedures comply with our interpretation of procedural fairness. In order to answer RQ3, we will select (Section 6.1) three CODR procedures, which are expected to some extent to comply with our interpretation of procedural fairness. Next, we will analyse whether the selected procedures actually comply with our interpretation of procedural fairness (Section 6.2). Finally, a conclusion is drawn (Section 6.3).

6.1 SELECTION OF THREE CODR PROCEDURES

We have selected three CODR procedures, which represent each of the three types of CODR procedures, namely, (1) online opinion polls, (2) online mock jury systems, and (3) arbitration tribunals rendering self-enforceable decisions. If we would select fewer than three CODR procedures, our analysis would lack completeness because it will draw conclusions about the fairness and procedural justice of CODR procedures without taking into account the characteristics of all three types of CODR procedures. If we select more than three CODR procedures, we may not be able to analyse each of the procedures in depth due to resolving and analysing subordinate differences between any two CODR procedures of the same type.

In order to select three CODR procedures, we will use the following two criteria: (1) the availability of documents explaining the examined procedures; and (2) the use of adjudication for resolving disputes. The reason for choosing the first criterion is that the examination of the compliance of a procedure with our interpretation of procedural fairness requires a detailed description of the examined procedure. We have chosen adjudication as a second criterion because it is, subject to one exception, used by all CODR procedures.¹ Thus, we can build a model of a fair CODR procedure on the basis of similar procedures and, more particularly, CODR procedures using adjudication. A model built on procedures using different mechanisms for resolving disputes may have internal inconsistencies because it will be created on the basis of comparing “apples with pears”, and not “apples with apples”.

1 All existing and past CODR procedures use adjudication for resolving disputes, except for PeopleClaim, which uses a combination between negotiation and mediation. PeopleClaim is examined in detail in Section 3.1.B2.

Obviously, there is a significant difference between mediation and adjudicative ADR procedures (cf. Spies, 2014, p. 4). More specifically, while mediation facilitates the parties to resolve the conflict on their own, arbitration involves a decision by the intervening arbitrator (Ladd and Blanchfield, 2016, p. 208).

Below, we explain how we will use the two criteria to select three CODR procedures representing online opinion polls (Subsection 6.1.1), online mock jury systems (Subsection 6.1.2), and arbitration tribunals rendering self-enforceable decisions (Subsection 6.1.3).

6.1.1 Selection of a CODR procedure representing online opinion polls

In order to select a CODR procedure representing online opinion polls, we assess all CODR procedures that function as online opinion polls in accordance with the aforementioned criteria. Table 3 shows our findings.

| CODR procedure functioning as online opinion poll | Availability of documents explaining the examined procedures | Use of adjudication for resolving disputes |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>iCourthouse (i-courthouse.com)</i> | The procedure of iCourthouse is explained in detail in iCourthouse’s Rule of Procedure ² and a FAQ document. ³ | iCourthouse uses adjudication for resolving disputes. More particularly, iCourthouse uses arbitration rendering evaluation reports indicating the number of verdicts for the plaintiff and for the defendant. |
| <i>Sidetaker (sidetaker.com)</i> | Sidetaker does not have a rule of procedure. Sidetaker’s procedure is explained to some extent in a FAQ document. ⁴ | Sidetaker uses adjudication for resolving disputes. More particularly, Sidetaker uses arbitration rendering evaluation reports indicating the percentage of verdicts in favour of the plaintiff and for the defendant. |
| <i>PeopleClaim (peopleclaim.com)</i> | The operation of PeopleClaim is clearly explained in textual and video form on peopleclaim.com . Furthermore, some information about PeopleClaim’s operation is provided in a FAQ document. ⁵ | PeopleClaim uses negotiation and mediation for resolving disputes. In more detail, if the dispute is not resolved through negotiation, the parties may allow the public to provide suggestions related to the resolution of the dispute. |

Table 3. Assessment of CODR procedures that function as online opinion polls in accordance with two criteria, namely, availability of documents explaining the examined procedures and the use of adjudication for resolving disputes

2 The i-courthouse’s rule of procedure is available at www.i-courthouse.com/main.taf?area1_id=front&area2_id=rulesofproc (last visited Jan. 3, 2017).

3 The FAQ document explaining the operation of i-courthouse is available at www.i-courthouse.com/main.taf?area1_id=front&area2_id=faqs (last visited Jan. 3, 2017).

4 The FAQ document explaining the operation of sidetaker is available at www.sidetaker.com/faq.php (last visited Jan. 3, 2017).

5 The FAQ document explaining the operation of PeopleClaim is available at www.peopleclaim.com/faq.aspx?cID=1 (last visited Jan. 3, 2017).

The information in Table 3 clearly indicates that only iCourthouse and Sidetaker meet the two criteria chosen by us. PeopleClaim does not meet the second criterion because it uses negotiation and mediation, but not adjudication. Hence, we need to select either iCourthouse or Sidetaker.

We choose to examine iCourthouse because it has published a rule of procedure, which can help us to analyse in detail iCourthouse's procedural fairness. We note that Sidetaker has not published such a rule of procedure.

| CODR procedure functioning as an online mock jury system | Availability of documents explaining the examined procedures |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>eJury (ejury.com)</i> | The operation of eJury is explained in two documents, namely, Terms & Conditions for Attorneys ⁶ and Terms & Conditions for eJurors. ⁷ |
| <i>JuryTest (jurytest.net)</i> | The operation of JuryTest is explained in two webpages entitled "Lawyers" ⁸ and "Jurors". ⁹ It should be noted that JuryTest has published a sample case report which provides valuable information about the operation of JuryTest. ¹⁰ |
| <i>OnlineVerdict (onlineverdict.com)</i> | The operation of OnlineVerdict is explained in four webpages, namely, (1) a webpage explaining the operation of OnlineVerdict to jurors ¹¹ , (2) a webpage explaining the operation of OnlineVerdict to attorneys ¹² , (3) a webpage containing FAQ related to jurors ¹³ , and (4) a webpage containing FAQ related to attorneys. ¹⁴ |
| <i>TrialJuries (trialjuries.com)</i> | The operation of TrialJuries is explained in a webpage entitled "How it Works" ¹⁵ and a webpage "FAQ". ¹⁶ |

Table 4. Assessment of CODR procedures that function as online mock jury systems in accordance with one criterion, namely, the use of adjudication for resolving disputes

- 6 Terms & Conditions for Attorneys is available at www.ejury.com/attys_terms.html (last visited Jan. 3, 2017).
- 7 Terms & Conditions for eJurors is available at www.ejury.com/jurors_terms.html (last visited Jan. 3, 2017).
- 8 The webpage explaining the operation of JuryTest to lawyers is available at www.jurytest.net/index.cfm?action=howlaw (last visited Jan. 3, 2017).
- 9 The webpage explaining the operation of JuryTest to jurors is available at www.jurytest.net/index.cfm?action=howjur (last visited Jan. 3, 2017).
- 10 The simple case report published by JuryTest is available at www.jurytest.net/survey-Quest/QuestResult.cfm?jQuest=y&vtype=pr&n_id=989&typ=d&fid=165&c_id=989 (last visited Jan. 3, 2017).
- 11 The webpage explaining the operation of OnlineVerdict to jurors is available at www.onlineverdict.com/jurors/how-it-works (last visited Jan. 3, 2017).
- 12 The webpage explaining the operation of OnlineVerdict to attorneys is available at www.onlineverdict.com/attorneys/attorney-how-it-works (last visited Jan. 3, 2017).
- 13 The webpage containing FAQ related to jurors is available at www.onlineverdict.com/jurors/juror-faqs (last visited Jan. 3, 2017).
- 14 The webpage containing FAQ related to attorneys is available at www.onlineverdict.com/attorneys/faqs (last visited Jan. 3, 2017).
- 15 The webpage entitled "How it Works" is available at <https://www.tlextranet.com/trialjuries/howitworks.html> (last visited Apr. 4, 2016).
- 16 The webpage entitled "FAQ" is available at <https://www.tlextranet.com/trialjuries/faq.html> (last visited Apr. 4, 2016).

6.1.2 Selection of a CODR procedure representing online mock jury systems

We will select a CODR procedure representing online mock jury systems on the basis of one criterion only, namely, availability of documents explaining the examined procedures. The use of adjudication for resolving disputes cannot be used as a criterion for selecting CODR procedures representing online mock jury systems because all such procedures use “mock” adjudication for the resolution of disputes. Table 4 displays the findings of our assessment of CODR procedures that function as online mock jury systems in accordance with the criterion chosen by us.

Taking into account the information provided in Table 4, we choose to proceed with JuryTest because of the availability of a sample case report which may provide us with valuable information related to the operation of JuryTest. We note that all examined CODR procedures functioning as online mock jury systems provide their users with comprehensive documents explaining their operation.

6.1.3 Selection of CODR procedures representing arbitration tribunals rendering self-enforceable decisions

Up until the present moment, four CODR procedures representing arbitration tribunals rendering self-enforceable decisions exist or have existed. These three CODR procedures are (1) the ECRF, (2) Marktplaats Gebruikersjury, (3) Taobao User Dispute Resolution Center, and (4) and League of Angels Tribunal. In order to select a CODR procedure representing arbitration tribunals rendering self-enforceable decisions, we assess all four procedures in accordance with the aforementioned criteria: availability of documents and use of adjudication. Table 5 shows our findings.

The information in Table 5 clearly indicates that all four CODR procedures meet the two criteria chosen by us. However, we chose the ECRF because of two reasons, namely, (1) its legal documents are published in English, which is the language of the present work and (2) its legal documents are comprehensive (the cumulative length of the ECRF’s legal documents is 3809 words, whereas the total length of the League of Angels Tribunal legal document is 950 words). Thus, we avoid the need for translation and the accompanying problems, such as non-equivalence between the legal terms in different languages.

| CODR procedure functioning as arbitration tribunals rendering self-enforceable decisions | Availability of documents explaining the examined procedures | Use of adjudication for resolving disputes |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>The ECRF</i> (www.ebaycourt.com) | Although the ECRF was discontinued on 31 st of January 2012, the legal documents governing the ECRF are available on www.archive.org , a website which allows archives of the World Wide Web to be searched and accessed. The operation of the ECRF is explained in two documents, namely, Community Court FAQs ¹⁷ and the Community Court Help. ¹⁸ | The ECRF uses adjudication for resolving disputes. More precisely, the ECRF uses non-legally binding arbitration which renders self-enforceable decisions. |
| <i>Marktplaats Gebruikersjury</i> (https://gebruikersjury-marktplaats.modria.com) | The operation of Marktplaats Gebruikersjury is explained in Dutch at https://gebruikersjury-marktplaats.modria.com/mp/jsp/TermsAndConditions.jsp . | Similarly to the ECRF, Marktplaats Gebruikersjury uses non-legally binding arbitration rendering self-enforceable decisions. |
| <i>Taobao User Dispute Resolution Center</i> (http://pan.taobao.com/) | The operation of Taobao User Dispute Resolution Center is explained in Chinese at http://pan.taobao.com/ | Taobao User Dispute Resolution Center uses non-legally binding arbitration rendering self-enforceable decisions. |
| <i>League of Angels Tribunal</i> http://na.leagueoflegends.com/tribunal/ | The operation of the League of Angels Tribunal is described in a FAQ document. ¹⁹ | League of Angels Tribunal uses non-legally binding arbitration rendering self-enforceable decisions. ²⁰ |

Table 5. Assessment of CODR procedures that function as arbitration tribunals rendering self-enforceable decisions in accordance with two criteria, namely, availability of documents explaining the examined procedures and the use of adjudication for resolving disputes

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- 17 The Community Court FAQ's is accessible at <http://web.archive.org/web/20101202200651/http://ebaycourt.com/cc/FAQ.jsf> (last visited Jan. 3, 2017).
- 18 The Community Court Help page is accessible at <http://web.archive.org/web/20101202200619/http://ebaycourt.com/cc/CommunityCourtHelp.jsf> (last visited Jan. 3, 2017).
- 19 League of Angels' FAQ document effective as of 29th of November 2014 is accessible at <http://web.archive.org/web/20141129183148/http://na.leagueoflegends.com/tribunal/en/faq/> (last visited Jan. 3, 2017). It should be noted that the League of Angel's FAQ is not currently available as the tribunal is down for maintenance. See http://tribunal.na.leagueoflegends.com/en_US/maintenance.html (last visited Dec. 262016).
- 20 It should be noted that the verdicts of the tribunal are directly enforceable only if they relate to low-level penalties, such as email warnings. The player support staff of League of Angels is responsible for reviewing and sanctioning severe cases. See Section 5 of League of Angel's FAQ document effective as of 29th of November 2014. The document is available at <http://web.archive.org/web/20141129183148/http://na.leagueoflegends.com/tribunal/en/faq/> (last visited Jan. 3, 2017).

6.2 ANALYSIS OF COMPLIANCE WITH OUR INTERPRETATION

Below, we will assess the compliance of iCourthouse (Subsection 6.2.1), JuryTest (Subsection 6.2.2), and the ECRF (Subsection 6.2.3) with our interpretation of procedural fairness. It is followed by a section summary (Subsection 6.2.4).

6.2.1 The compliance of iCourthouse with our interpretation

An assessment of the compliance of iCourthouse with each of the fifteen elements of our interpretation of procedural fairness (A-O) follows.

A: *Expertise*

iCourthouse's Rules of Procedure do not require the members of the crowd to have any particular expertise.²¹

B: *Independence*

iCourthouse lacks rules ensuring the personal and functional independence of the jurors. Furthermore, iCourthouse has rules incentivising the appointment of jurors who may have relationships which may influence their decisions. More specifically, Rule 6 of iCourthouse's Rule of Procedure states:

"Rule 6: Invitation to Juror Duty

(a) Each party may invite persons to serve as jurors on a case. There is no limit on the number of invitations that can be issued.

(b) Persons invited to serve as juror on a case may forward the invitation to others."

Rule 6 of iCourthouse's Rule of Procedure *de facto* permits the parties to invite their families, friends, and co-workers to act as jurors in their case. Such jurors will most probably vote in favour of the party who invited them.

C: *Impartiality*

iCourthouse has not adopted any measures aiming to ensure that the jurors are impartial. iCourthouse's Rule of Procedure does not oblige the jurors to act impartially. For example, if a juror decides a case merely on the information of the nationality of the party, the juror will not contravene iCourthouse's Rule of Procedure.

Also, it is worth noting that the jurors can see the verdicts (including the reasons for the verdicts) posted by other jurors. This can lead to an informational cybercascade in which people will decide the case on the basis of the other verdicts and not on the basis of the merits of the case.²²

21 iCourthouse's Rules of Procedure can be found at www.i-courthouse.com/main.taf?area1_id=about&area2_id=rulesofproc (last visited Jan. 3, 2017).

22 Informational cybercascades were discussed in Section 3.1 (D).

D: Transparency

iCourthouse's Rules of Procedure consist of eight rules governing iCourthouse's dispute resolution procedure.²³ These eight rules are easily accessible on the website of iCourthouse. iCourthouse's Rules of Procedure make the dispute resolution procedure understandable and easy to replicate.

E: Fair Hearing

iCourthouse complies with the two sub-elements of the element of fair hearing, namely, (1) ensuring that each party participates in the dispute resolution process and (2) ensuring that each party can present its case and rebut the case of the opponent.

Regarding the first sub-element, we note that iCourthouse's Rule of Procedure does not state whether an adequate notice is sent to the defendant once the claim is filed with iCourthouse. However, our empirical research indicated that the defendant receives an adequate notice by email immediately after the submission of the claim. The text of the notice is provided in Figure 19.

After the defendant completes the trial book, the website of iCourthouse informs the disputants about the commencement of the procedure.²⁴

Pertaining to the second sub-element, the claimant and the defendant are allowed to present statements and evidence in a trial book, which will be read by the jurors.²⁵ Hence, both disputants have the right to be heard.

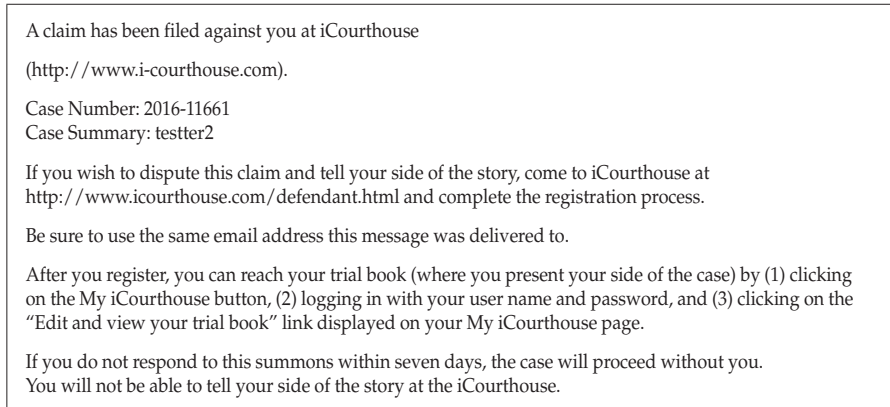


Figure 19. A notice sent by iCourthouse to the defendant

23 iCourthouse's Rules of Procedure can be found at www.i-courthouse.com/main.taf?area1_id=about&area2_id=rulesofproc (last visited Jan. 3, 2017).

24 The status of the iCourthouse cases is available at www.i-courthouse.com/main.taf?area1_id=cases (last visited Jan. 3, 2017).

25 See Rule 5 of iCourthouse's Rule of Procedure. The Rule of Procedure is accessible at http://www.i-courthouse.com/main.taf?area1_id=about&area2_id=rulesofproc (last visited Jan. 3, 2017).

F: Counterpoise

iCourthouse does not neutralise the existing imbalances in the financial status of the disputants and the computer skills of the disputants. This is because iCourthouse's procedure is available and accessible exclusively online. Thus, disputants who do not have access to the Internet due to lack of financial resources will not be able to participate in the dispute resolution. The same applies to disputants who do not have computer skills.

G: Ensuring a reasonable length of procedure

iCourthouse's Rule of Procedure does not specify a time period within which the outcome of the procedure should be made available. As a result, there are many cases which have not been decided for over 15 years.²⁶

H: Providing reasons

Although the jurors are allowed to publish the reasons for their decisions, the publication of reasons is not mandatory. If the jurors do not publish the reasons for their decisions, the disputants may not be able to understand whether the case was decided on the basis of a rational analysis. For example, an iCourthouse juror in case 2006-11528 made a decision without providing any comments. All what the disputants can see in relation to the contribution of the juror is as follows: "Juror 7: Has rendered a verdict in favour of the defendant (Mar 24, 2006)."

I: Voluntary participation

The participation in iCourthouse is voluntary. The decisions made through iCourthouse will be binding and enforceable only if the disputants agree so. In this regard, iCourthouse's FAQ states as follows:

"You can use the following language to make your decision enforceable: "We, the parties to case number --- agree that the verdict rendered by the jury in the iCourthouse case will be binding on us, and will be enforceable as a judgment in a court of appropriate jurisdiction."²⁷

J: Process control

The disputants do not have a strong process control because they can submit limited statements and evidence. More specifically, the disputants are allowed to submit a brief summary of the case, which cannot exceed 100 words, opening statement which cannot exceed 400 words, and arguments which cannot exceed 400 words. The submission of evidence is governed by Rule 2 of iCourthouse's Rule of Procedure which states that: (i) parties are not allowed to submit files which are smaller than 100 kilobytes; and (ii) the total evidence submitted by the parties shall not exceed 1 megabyte.

26 See, for example, iCourthouse case numbers 2001-10662, 2001-10665, 2001-10666. Those three cases have not been resolved since 2001.

27 iCourthouse's FAQ document is accessible at http://www.i-courthouse.com/main.taf?area1_id=cases&area2_id=faqs (last visited Jan. 3, 2017).

The aforementioned restrictions significantly limit the control of the disputants over the development and selection of information that will constitute the basis for making a decision. For example, the disputants are unable to upload high resolution pictures and videos which often exceed 1 megabyte. Besides, the disputants are unable to upload complex arguments exceeding 400 words.

K: Decision control

The disputants have a strong decision control because the evaluation reports rendered by iCourthouse will not be legally binding unless the disputants agree otherwise. In case the disputants would like to make the evaluation report issued by iCourthouse binding, they need to accept a clause published by iCourthouse.²⁸ The clause reads as follows:

“In the event that a dispute arises out of this transaction, the parties agree to submit that dispute for binding resolution through iCourthouse. In the event that a party shall refuse to submit the dispute to iCourthouse, or files an action in any other court without first offering dispute resolution through iCourthouse, that party shall lose any right to attorney’s fees it might otherwise be entitled to. The parties further agree that any verdict of iCourthouse may be reduced to a judgement in any court having jurisdiction over the parties, at the option of any party, without further adjudication.”

It should be noted that the inclusion of the aforementioned clause can be problematic because iCourthouse does not render final verdicts. It renders evaluation reports indicating the number of verdicts in favour of the claimant and the defendant. However, the number of verdicts in favour of the claimant and the defendant may change over time. Hence, if the disputants include the aforementioned clause in their legally binding agreement, a dispute may arise as to when the evaluation report rendered by iCourthouse becomes final. In order to avoid such a dispute, the disputants may “agree that only the verdicts given before a specific date and time will count, or that only the first given number of verdicts will count.”²⁹ However, as Schiavetta (2008, p. 157) points out, if the disputants reach an agreement, but later become aware that some of the third parties lack independence or impartiality it will be too late to have the agreement void.

L: Consistency

The cases submitted to iCourthouse are publicly available on the Internet.³⁰ However, under iCourthouse’s Rule of Procedure, the jurors are not obliged to read previous cases and render decisions which are consistent with previously decided cases. The only obligation of the jurors is to “read and review

28 The clause is available at http://www.i-courthouse.com/main.taf?area1_id=front&area2_id=faqs (last visited Jan. 3, 2017).

29 See iCourthouse’s FAQ available at www.i-courthouse.com/main.taf?area1_id=front&area2_id=faqs (last visited Jan. 3, 2017).

30 The cases submitted to iCourthouse are publicly available at www.i-courthouse.com/main.taf?area1_id=cases (last visited Jan. 3, 2017).

the entire contents of each party's Trial Book before rendering a verdict."³¹ Therefore, in iCourthouse, similar cases may lead to totally different verdicts.

It is worth mentioning that the iCourthouse cases are not classified in accordance with the issues discussed in the cases. The iCourthouse cases are merely listed in accordance with their case number. As a result, even if the jurors would like to render consistent decisions, the jurors may not be able to find relevant previously decided cases. The consistency of the decisions requires classification of cases on the basis of the issues discussed in them. Such a classification is provided, for example, in respect to the UDRP decisions.³²

M: Accuracy

iCourthouse allows either disputant to notify the jurors about inaccurate information submitted by the other disputant. Thus, iCourthouse ensures that the jurors will make a decision based only on accurate information. For example, in iCourthouse case No 2006-11530, one of the jurors clearly states that the evidence presented by the claimant is inaccurate. The exact comment of the juror follows.

*"The plaintiff presents no evidence; the picture is so tiny it is impossible to tell what, if any, damage there is to the face; there is no medical evidence presented telling what this "scarring" is, what caused it, etc. There is also no explanation as to who the "characters" in this little mini drama are... what capacity did the defendant have at the restaurant? What would his motive be for poisoning you? Where is the medical evidence? Sorry. You need to present a far better case than this."*³³

N: Correctability

The decision rendered through iCourthouse can be appealed in iCourthouse unless the disputants have agreed that the decision cannot be appealed. For instance, the disputants can appeal the decision by using the paid feature "JurySmart" provided by iCourthouse.³⁴ This feature allows the parties to receive a written report of the results of their appeal case, which includes (i) each juror's verdict, (ii) comments and questions posed by jurors, and (iii) detailed profiles about each juror containing each juror's age, sex, occupation, education, and annual income. Being more detailed, the JurySmart report seems more credible than the case summaries, which are provided by iCourthouse to disputants who use the regular functionality of iCourthouse.

31 See Rule 7 of iCourthouse's Rule of Procedure available at www.i-courthouse.com/main.taf?area1_id=cases&area2_id=rulesofproc (last visited Jan. 3, 2017).

32 The website of the Czech Arbitration Court, an accredited UDRP provider, allows the visitors of the website to search for UDRP decisions by using a large number of criteria related to the issues discussed in the UDRP decisions. The website of the Czech Arbitration Court is available at <http://udrp.adr.eu> (last visited Jan. 3, 2017).

33 The comment of the juror is available at www.i-courthouse.com/main.taf?area1_id=trialbook&trialbook_id=16895 (last visited Jan. 3, 2017).

34 For more information on JurySmart, please visit www.i-courthouse.com/main.taf?area1_id=jurysmart (last visited Jan. 3, 2017).

O: Ethicality

The assessment of the compliance of iCourthouse with the component of ethicality will vary depending on the personal standards of ethics and morality of the users of iCourthouse. Hence, an objective assessment of the compliance of iCourthouse with the component of ethicality is not possible.

For the sake of clarity, we note that there are two types of assessments, namely, objective and subjective assessments (cf. Maunganidze, Kasayira, and Mudhorozzi, 2012, p. 332). The objective assessment is a form of questioning which has a single correct answer, whereas the subjective assessment is a form of questioning which may have more than one correct answer.

6.2.2 The compliance of Jurytest with our interpretation

An assessment of the compliance of JuryTest with each of the fifteen elements of our interpretation of procedural fairness (A-O) is provided below.

A: Expertise

JuryTest does not require jurors to have legal skills and/or expertise in alternative dispute resolution.³⁵ Candidates for jurors should meet four requirements, none of which is related to their expertise. The requirements are as follows: (1) jurors should not be lawyers; (2) jurors should not be insurance company representatives; (3) jurors should not participate as consultants to the lawyers who will use the services provided by JuryTest; and (4) jurors should not disclose the names of any parties mentioned in the mock cases.³⁶

B: Independence

JuryTest neither obliges the jurors to be independent nor uses any safeguards aiming to ensure the independence of the jurors. However, by requiring the jurors to keep confidential the facts and the names of any of the parties in cases in which they are involved as jurors, JuryTest ensures that the jurors would not be able to create relationships with the disputants involved in the case.³⁷ Such relationships may have an impact on the independence of the jurors.

C: Impartiality

In order to register as jurors, the jurors need to meet the requirements mentioned in Subsection 6.2.2 A. However, JuryTest does not oblige the mock jurors to be impartial when deciding the cases.

35 The requirements to which JuryTest jurors should comply are available at <http://jurytest.net/index.cfm?action=signupjur> (last visited Jan. 3, 2017). It should be noted that jurors in general are not required to have expertise as they are merely triers of facts (cf. Harrower, 2001; Kelly and Slapper, 2012, p. 485).

36 *Idem.*

37 *Idem.*

D: Transparency

The operation of JuryTest is explained in detail on its website.³⁸ More particularly, the operation consists of six steps, namely, (1) preparing a summary of the case, (2) uploading exhibits, (3) recording the case by using a toll free number, (4) reviewing the case by the jurors, (5) provision of feedback by the jurors, and (6) receiving the feedback of the jurors.³⁹ The first, second, third, and sixth steps must be completed by the disputant who wants to test his real case, whereas the fourth and the fifth steps must be completed by the jurors. The detailed explanation of the operation of JuryTest makes this CODR procedure understandable and easy to replicate.

E: Fair hearing

JuryTest does not comply with the two sub-elements of the element of fair hearing, namely, (1) ensuring that each party participates in the dispute resolution process and (2) ensuring that each party can present its case and rebut the case of the opponent.

As for the first sub-element, since only one disputant (i.e., the disputant wanting to test its real case) is involved in the mock trials organised by JuryTest, no notice of commencement of the procedure is sent to other disputants. However, a disputant may, at its sole discretion, submit to other disputants a notice of commencement of the procedure outside JuryTest platform. The notice may contain a request for a response. The received response can be submitted to the JuryTest jurors.

Pertaining to the second sub-element, JuryTest does not provide all disputants with an opportunity to present their cases and rebut the cases of their opponents because only one disputant is involved in the mock trial. However, JuryTest strongly recommends the disputant using JuryTest to present the other side of the case by a “colleague playing opposing counsel”.⁴⁰

F: Counterpoise

Since only one disputant is involved in the CODR procedure provided by JuryTest, JuryTest does not have any rules aiming to neutralise the existing imbalances in the financial status of all disputants and the computer skills of all disputants.

G: Ensuring a reasonable length of procedure

JuryTest states that jurors will provide their feedback within a day or two.⁴¹ If the disputant testing his real case pays a slight surcharge to JuryTest, the jurors will provide their feedback quicker.⁴² Hence, JuryTest ensures a reasonable length of procedure.

38 The operation of JuryTest is explained at <http://jurytest.net/index.cfm?action=howlaw> (last visited Jan. 3, 2017).

39 See <http://jurytest.net/index.cfm?action=howlaw> (last visited Jan. 3, 2017).

40 See www.jurytest.net/how/how_popup.cfm?action=L1 (last visited Jan. 3, 2017).

41 See www.jurytest.net/how/how_popup.cfm?action=L5 (last visited Jan. 3, 2017).

42 See www.jurytest.net/how/how_popup.cfm?action=L5 (last visited Jan. 3, 2017).

H: Providing reasons

JuryTest requires jurors to complete a detailed questionnaire, which may include questions about the reasons for making a decision.⁴³ A sample questionnaire published by JuryTest contains a number of such questions, e.g., “What was the primary reason for your verdict decision?”, “How did you decide the amount of damages you awarded, if any?”, “What were the two strongest points in favour of the plaintiff, Estate of Edward Smith?”, “What were the two strongest points in favour of the defendant, Maxwell Jones, M.D.?”⁴⁴

I: Voluntary participation

The disputant wanting to test his real case voluntarily agrees to use the services of JuryTest. The same applies for jurors.

J: Process control

The disputant wanting to test his real case has a strong process control because it has the opportunity to provide the jurors with: (i) an audio summary of up to 30 minutes; and (ii) unlimited evidence. The disputant willing to record an audio summary can do so either by calling a toll-free number or by receiving a phone call from JuryTest’s staff.⁴⁵

The disputant recording the summary can support his argument by adding visual exhibits to the audio summary.⁴⁶ Jurors will see the exhibits in the same order in which they were presented by the disputant.⁴⁷ According to JuryTest, the use of visual exhibits makes the presentation more interesting and allows the disputant to capture the full dimensions of the case.⁴⁸

Once recorded, the summary is converted to a streaming media file and delivered to the jurors.⁴⁹

K: Decision control

The verdicts rendered by the jurors are recommendations, which can be used as a negotiating tool by the disputant who conducted the mock trial organised by JuryTest. More specifically, the disputant using the services provided by JuryTest will receive information about his Best Alternative to a Negotiated Agreement (BATNA), which can be used for deciding whether or not to accept a negotiation offer (cf. Blake, Browne, Sime, 2014, p. 186). It should be noted that the disputant using the services provided by JuryTest has a full decision control, i.e., a yes-no control over the acceptance of the verdict rendered by JuryTest jurors.

43 See www.jurytest.net/how/how_popup.cfm?action=L5 (last visited Jan. 3, 2017).

44 See www.jurytest.net/surveyQuest/QuestResult.cfm?jQuest=y&vtype=pr&n_id=989&typ=d&fid=165&c_id=98 (last visited Jan. 3, 2017).

45 See <http://jurytest.net/index.cfm?action=howlaw> (last visited Jan. 3, 2017).

46 See http://jurytest.net/how/how_popup.cfm?action=L2 (last visited Jan. 3, 2017).

47 Idem.

48 Idem.

49 See <http://jurytest.net/index.cfm?action=howlaw> (last visited Jan. 3, 2017).

L: Consistency

JuryTest does not publish any information about the verdicts rendered by JuryTest jurors. The only exception is a sample case report.⁵⁰ Thus, the verdicts rendered by JuryTest jurors may be inconsistent with previously decided cases. In order to ensure consistency of the decisions, JuryTest needs to publish at least short summaries of the decided cases in which any confidential information is removed. In addition to ensuring consistency of the decisions, these short summaries will provide other disputants with information about their BATNAs, which can be used for out-of-court settlement of disputes.

M: Accuracy

JuryTest does not have any mechanisms ensuring that the verdicts of JuryTest will be based on accurate information. Consequently, if a disputant using the services of JuryTest provides incorrect information to JuryTest jurors, no one can challenge the accuracy of the information. In comparison to iCourthouse, JuryTest jurors are not allowed to ask the disputants questions aiming to find out whether the information provided to the jurors is accurate.

N: Correctability

If JuryTest jurors made a decision on the basis of incorrect information, the disputant using the services of JuryTest can always commence a new mock trial procedure on the basis of the correct information. Consequently, the users of JuryTest have unlimited opportunity to correct the information used for making decisions.

O: Ethicality

An objective assessment of the compliance of JuryTest with the component of ethicality is not possible. The reason is that the assessment of ethicality depends on personal standards of ethics and morality, which differ across people.

6.2.3 The compliance of the ECRF with our interpretation

Below, we provide an assessment of the compliance of the ECRF with each of the fifteen elements of our interpretation of procedural fairness (A-O).

50 See the sample case report published by JuryTest. The report is available at https://www.jurytest.net/surveyQuest/QuestResult.cfm?jQuest=y&vtype=pr&n_id=989&typ=d&fid=165&c_id=98 (last visited Jan. 3, 2017).

A: Expertise

The ECRF jurors are not required to have understanding of law and/or skills in alternative dispute resolution.⁵¹ However, they are required to meet certain requirements related to their eBay transaction history. These requirements are examined in detail in Section 3.3.A.

B: Independence

Independence of the jurors in the ECRF is guaranteed by the requirement that jury members will not be allocated to a case if they have ever had a transaction with either party of the case. It should be noted that in comparison with traditional arbitration, including online arbitration, where the independence of the arbitrator is guaranteed by obliging the arbitrator to declare certain relationship with the disputants, the ECRF automatically prevents an appointment of an arbitrator who has certain relationship with the disputants. Consequently, since requiring the arbitrators to disclose any circumstances giving rise to justifiable doubt as to the arbitrator's impartiality or independence cannot in practice ensure that the arbitrator will disclose any relationship between the disputants, the independence of the third neutral party in the ECRF is better guaranteed than in the traditional arbitration. This is because instead of relying on the arbitrator to disclose information concerning his impartiality or independence it automatically detects relationships between the member of the crowd and the disputants. Actually, the ECRF can be regarded as the first dispute resolution platform that is able to establish automatically relationships between the disputants and the third neutral party. This method for guaranteeing independence is completely new. Once it is fully developed and applied, it will certainly ensure a fairer dispute resolution procedure.

C: Impartiality

The impartiality in the ECRF is ensured by four ways. First, the ECRF keeps the names and other contact information of the jurors in anonymity.⁵² It makes impossible for the disputants to contact the jurors and to affect their impartiality.

Second, the jury is randomly allocated.⁵³ Consequently, an eventual partial juror will have difficulties to find the case in which he has interest. The only way to do this is to participate in several cases, until he is appointed to the "right" case. Therefore, more cases in the ECRF will mean a better guarantee for the impartiality of the crowd.

51 See Community Court's FAQs, <http://www.ebaycourt.com/cc/FAQ.jsf>. The archived webpage is available at <https://web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf> (last visited Jan. 3, 2017). See also "Community Court Help", <http://ebaycourt.com/cc/CommunityCourtHelp.jsf>. The archived webpage is accessible at <https://web.archive.org/web/20101123102540/http://ebaycourt.com/cc/CommunityCourtHelp.jsf> (last visited Jan. 3, 2017).

52 Idem.

53 Idem.

Third, if it is highly likely that the juror is impartial, the ECRF will stop referring cases to this juror. In order to find out whether the juror is impartial, the ECRF checks (1) how many times the members of the crowd are in minority on a decision, (2) how long they review the information submitted by the buyer and the seller, and (3) the rationale that the jurors provide to back up their decisions (cf. Rule and Nagarajan, 2010, p. 6). If a member of the crowd is several times in the minority on a decision, takes a decision in a very short time or without reasoning, it is likely that he is either partial or takes decisions without using a rational approach (cf. Rule and Nagarajan, 2010, p. 6).

Fourth, if there are only hesitations concerning his impartiality, the “suspected” juror receives a test, which is composed from already solved case. If he does not pass the test, the ECRF will no more refer cases to him (see Rule and Nagarajan, 2010, p. 6).

D: Transparency

The webpages “Community Court’s FAQs” and “The Community Court Help” provided the users of the ECRF with extensive information about the operation of the ECRF.⁵⁴ This information makes the ECRF procedure understandable and easy to replicate.

E: Fair hearing

The ECRF complies with the two sub-elements of the element of fair hearing, namely, (1) ensuring that each party participates in the dispute resolution process and (2) ensuring that each party can present its case and rebut the case of the opponent.

Regarding the first sub-element, the defendant receives a notice about the claim through email.⁵⁵ The notice of the claim provides the defendant with instructions on how to respond to the claim.⁵⁶ The claimant is informed about the submissions of the defendant by email and provided with the opportunity to respond to the submissions within a time period of 2 days.⁵⁷

It should be pointed out that the submission of notices via email has two disadvantages compared to submission of notices via regular mail (cf. Kennedy and Mighell, p. 207). First, since many users receive a large number of spam message, notices can get lost or overlooked amongst spam messages. Second, as spam filters become more aggressive, notices may be identified as spam and never reach the recipient. In order to decrease the chance of unreceived messages due to the aforementioned problems, the ECRF could have sent the notices by using a number of forms of communication. For

54 See Community Court’s FAQs, www.ebaycourt.com/cc/FAQ.jsf. The archived webpage is available at www.web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf (last visited Jan. 3, 2017).

55 See Community Court’s FAQs, www.ebaycourt.com/cc/FAQ.jsf. The archived webpage is available at www.web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf (last visited Jan. 3, 2017).

56 *Idem*.

57 *Idem*.

example, the Czech Arbitration Court allows the parties in UDRP disputes to use three different communication forms, namely, (1) electronic form (via an online platform with notifications by email), (2) hard copy sent by registered post or courier service, and (3) facsimile form (telefax).⁵⁸

Concerning the second sub-element, each disputant in an ECRF case is allowed to upload information in order to support its case. This information might include, for example: (1) dates of bidding, buying, and paying; (2) the date of sending or receiving an item; (3) proof that the item is paid, sent or received; (4) information about the condition in which the item was sent or received; (5) all other information that will support the case.⁵⁹ Moreover, the disputants can write a statement of up to 5000 characters and include up to 3 photos.⁶⁰ A disputant has to agree to a Privacy Policy in order to send photos to the ECRF.⁶¹ This is required as the photos may contain personal information about some of the disputants.⁶² If a disputant does not agree with the Privacy Policy, the jury will not be able to see photo evidence from either side of the case. They will see a message informing them which disputant did not agree to the Privacy Policy.⁶³ The right to rebut the case of the opponent in the ECRF is guaranteed by the right of the buyer to respond to the claim.⁶⁴ The defendant has 10 days after the receipt of the notification of the claim.⁶⁵ Then, the claimant has two days to respond to the defendant's statement.⁶⁶

In the light of the aforementioned observations, we may conclude that the ECRF provides the parties with a fair hearing.

F: Counterpoise

The ECRF procedure is available and accessible exclusively online. Thus, disputants who do not have (1) financial resources to purchase access to the Internet and/or (2) computer skills required for using online applications would not be able to participate in the ECRF.⁶⁷ Therefore, the ECRF does not neutralise the existing imbalances in the financial status and the computer skills of the disputants.

58 See Section 2.13 "Communication during a UDRP proceeding" of the "Help" webpage published by the Czech Arbitration Court. The webpage is available at <https://udrp.adr.eu/adr/help/index.php> (last visited Jan. 3, 2017).

59 See, Community Court's FAQs, www.ebaycourt.com/cc/FAQ.jsf. The archived webpage is available at www.web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf (last visited Jan. 3, 2017).

60 Idem.

61 Idem.

62 Idem.

63 Idem.

64 Idem.

65 Idem.

66 Idem.

67 Since the disputants using the ECRF are users of an e-commerce website (eBay.com), they presumably have computer skills required for using online applications. However, this may not always be the case, e.g., the computer skills of an individual may be limited to purchasing goods from eBay and the skills necessary for taking and uploading photos and other evidence may lack.

G: Ensuring a reasonable length of procedure

According to the webpage “Community Court’s FAQs” published by the ECRF, the length of ECRF procedures cannot exceed 22 days. The time period of 22 days can be divided into three parts, namely, (1) the defendant has 10 days to respond to the claim, (2) the claimant has 2 days to add a rebuttal, and (3) the jury has 10 days to render a verdict.⁶⁸

H: Providing reasons

The ECRF does not require the jurors to provide reasons for their decisions.⁶⁹ Although the personnel working at the ECRF is allowed to monitor the decisions rendered by the ECRF, the lack of reasons for the ECRF decisions complicates the identification of bias and other violations of ECRF’s rules.⁷⁰

I: Voluntary participation

The documents explaining the operation of the ECRF do not mention any mandatory participation obligations to the disputants in ECRF.⁷¹ Hence, the disputants voluntarily participate in the CODR procedure.

J: Process control

The submissions of the disputants in the ECRF are limited to statements of up to 3 photos and a text of 5000 characters.⁷² This prohibition is in line with the ECRF’s statement that: “The best case is one that is concise, to the point, logical, and avoids irrelevant information or personal attacks.”⁷³

Hence, disputants are unable to present video evidence and sound evidence related to the case. This seriously limits the process control of the disputants. For example, a buyer would not be able to upload a video demonstrating that the purchased product does not operate as described by the seller.

One explanation for the prohibition to upload video evidence is that video evidence may be subject to a number of technical challenges, including a lack of bandwidth infrastructure in some countries and need to make sure that the jurors will have the software, which is necessary for watching the video evidence.

68 Idem.

69 Idem.

70 See Community Court’s FAQs, <http://www.ebaycourt.com/cc/FAQ.jsf>. The archived webpage is available at <https://web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf> (last visited Jan. 3, 2017). See also “Community Court Help”, <http://ebaycourt.com/cc/CommunityCourtHelp.jsf>. The archived webpage is accessible at <https://web.archive.org/web/20101123102540/http://ebaycourt.com/cc/CommunityCourtHelp.jsf> (last visited Jan. 3, 2017).

71 Idem.

72 See “The Community Court Help” available at <http://ebaycourt.com/cc/CommunityCourtHelp.jsf>. The archived webpage is available at <https://web.archive.org/web/20101123102540/http://ebaycourt.com/cc/CommunityCourtHelp.jsf> (last visited Jan. 3, 2017).

73 Idem.

K: Decision control

The disputants in the ECRF do not have any opportunity to reject or accept an ECRF decision.⁷⁴ If the jurors vote to remove the disputed feedback, an eBay Customer Service representative will remove the feedback.⁷⁵ If the jurors vote to keep the disputed feedback, the disputed feedback will remain intact in seller's profile.⁷⁶ This means that the disputants do not have any decision control over the ECRF decisions.

L: Consistency

Since the decisions of the ECRF are not made publicly available, the ECRF jurors are unable to take into account previously published decisions when deciding a case. As a result, the decisions rendered by the ECRF may be inconsistent.

Therefore, the ECRF does not use any mechanism ensuring the consistency of the ECRF decisions. As noted with regard to JuryTest, the consistency of the ECRF decisions can be ensured by (1) publishing short summaries of the decisions (without any confidential information) and (2) classifying the decisions in accordance with the issues discussed in them.

M: Accuracy

The ECRF allows either disputant to notify the jurors about inaccurate information submitted by other disputants. Since the jurors are experienced eBay members, they will be able to disregard information, which is proven to be inaccurate. Therefore, we may conclude that the ECRF ensures that the cases will be resolved on the basis of accurate information.

N: Correctability

Once delivered, an ECRF judgement cannot be corrected. This is clearly stated in the following paragraph of ECRF's FAQ:

*"The jury's decision is final and binding. There is no appeals process. eBay will not respond to any appeals made in relation to Community review forum verdicts. You cannot submit a case of unfair feedback twice."*⁷⁷

O: Ethicality

An objective assessment of the ethicality of the ECRF is not possible because the ethicality depends on personal standards of ethics and morality which differ widely amongst the people.

74 See Community Court's FAQs, <http://www.ebaycourt.com/cc/FAQ.jsf>. The archived webpage is available at <https://web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf> (last visited Jan. 3, 2017).

75 Idem.

76 Idem.

77 Idem.

6.2.4 Section summary

This section analysed the compliance of iCourthouse, JuryTest, and the ECRF with our interpretation of procedural fairness. Our summarised findings are shown in Table 6.

The findings clearly indicate that each of the three examined procedures do not comply with the requirements of our interpretation of procedural fairness. Expertise, counterpoise, and consistency appear to be the only elements with which none of the examined procedures complies. iCourthouse and JuryTest comply with seven of the fifteen elements of our interpretation of procedural fairness, whereas the ECRF complies with nine of the examined components. We note that the objective assessment of ethicality is not possible due to the variance of ethical and moral standards across people.

In the light of the foregoing, we may conclude that there is much space for enhancement of the procedural fairness of the examined three procedures.

| Examined procedure \ Element of our interpretation of procedural fairness | iCourthouse | JuryTest | ECRF |
|---------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|
| Expertise | - | - | - |
| Independence | - | - | V |
| Impartiality | - | - | V |
| Transparency | V | V | V |
| Fair hearing | V | - | V |
| Counterpoise | - | - | - |
| Ensuring a reasonable length of procedure | - | V | V |
| Providing reasons | - | V | V |
| Voluntary participation | V | V | V |
| Process control | V (There are serious limitations to the process control) | V | V (There are serious limitations to the process control) |
| Decision control | V | V | - |
| Consistency | - | - | - |
| Accuracy | V | - | V |
| Correctability | V | V | - |
| Ethicality | Objective assessment is not possible | Objective assessment is not possible | Objective assessment is not possible |

Table 6. Findings of the assessment of iCourthouse, JuryTest, and the ECRF with our interpretation of procedural fairness [– means “does not comply”, V means compliance]

6.3 CHAPTER SUMMARY

In this chapter, we started selecting three CODR procedures to examine as to whether they comply with our interpretation of procedural fairness. For the selection, we used the following two criteria: (1) availability of documents explaining the examined procedures; and (2) use of adjudication for resolving disputes used by the procedures. The first criterion was chosen because the examination of the compliance of a procedure with our interpretation of procedural fairness requires a detailed description of the examined procedure. The second criterion was chosen for two reasons. First, the three types of CODR procedures have representative procedures using adjudication. Second, we intend to build a model of a fair CODR procedure on the basis of similar procedures.

After selecting the procedures, we examined their compliance with our interpretation of procedural fairness. We found that the examined CODR procedures functioning as online opinion polls and online mock jury trials comply with seven elements of our interpretation of procedural fairness, whereas the ECRF complies with nine such elements.

It is possible that the automatic enforcement of the judgements rendered by the ECRF is the reason for the compliance of the ECRF with more elements of procedural fairness than CODR procedures functioning as online opinion polls and online mock jury trials. The enforcement of largely unfair decisions will have a direct impact on eBay's community. In order to ensure that such an impact will be well-accepted by the eBay's community, eBay designed the ECRF in such a way as to be more fair than the other two examined CODR procedures.

The direct answer to RQ3 (Are the past and present CODR procedures fair?) is that the examined CODR procedures do not comply with some of the elements of our interpretation of procedural fairness. It should be pointed out that our answer to RQ3 is based on the examination of three CODR procedures (i.e., iCourthouse, JuryTest, and the ECRF), and not on examination of all CODR procedures.

In this chapter, we design and construct a model of a CODR procedure that complies with our interpretation of procedural fairness. Thus, we answer the PS (To what extent is it possible for CODR procedures to resolve disputes in a way that complies with the requirements of procedural fairness) and accomplish our research goal (proposing a model of a CODR procedure that would guarantee a fair dispute resolution).

In Section 7.1, we describe our model of a fair CODR procedure. It constitutes a plethora of ideas for making CODR compliant with our interpretation of procedural fairness. The actual implementation of the ideas may vary depending on the characteristics of the respective CODR procedure. The model should not be accepted as an exhaustive list of ideas for ensuring compliance of CODR with our interpretation of procedural fairness. The model is designed as a starting point for academic debate in the fields of procedural fairness of CODR procedures. In Section 7.2, we summarize the model, i.e., we highlight the fifteen elements without giving the underlying role of the ideas.

7.1 THE COMPOSITION OF THE MODEL

The model consists of fifteen elements, each of which corresponds to one of the elements of our interpretation of procedural fairness. The fifteen elements of our model of a fair CODR procedure are expertise (7.1.1), independence (7.1.2), impartiality (7.1.3), transparency (7.1.4), fair hearing (7.1.5), counterpoise (7.1.6), ensuring a reasonable length of procedure (7.1.7), providing reasons (7.1.8), voluntary participation (7.1.9), process control (7.1.10), decision control (7.1.11), consistency (7.1.12), accuracy (7.1.13), correctability (7.1.14), and ethicality (7.1.15). Each of these elements is examined in more detail below.

7.1.1 Expertise

A CODR procedure should ensure that the members of the crowd meet the expertise requirements vested in Article 6(1)(a) of the Directive on consumer ADR (i.e., the necessary knowledge and skills in the field of alternative judicial resolution of consumer disputes and a general understanding of law) by allowing only members of the crowd meeting those requirements to participate in the procedure.

The screening process as to whether a member of the crowd complies with the requirements of Article 6(1)(a) may consist of three steps, namely, (1) completion of an online application, (2) taking a short subject matter test, and (3) crowd verification of credentials proving that the requirements of Article 6(1)(a) are met. In the first step, the members of the crowd will need add information about their knowledge and skills in the field of alternative judicial resolution of consumer disputes and a general understanding of law. In the second step, they will need to take an online test, which aims to find out whether the information in the online application corresponds to their actual knowledge and skills. In the third step, the knowledge and the skills of the members of the crowd will be verified by using crowd verification.

Crowd verification is a process in which the crowd has the task to verify information (cf. Wintterlin and Blöbaum, p. 86, 2016). At present, crowd verification is used for various purposes, including, without any limitation so far, verifying biological network models¹ and software verification (cf. Logas, Kirchner, Murray, Schäfer, Whitehead Jr., 2014). Furthermore, there are proposals for using crowdsourcing for verification of international treaties and verification of disaster signals published in social media (see Meier, 2013; Aftergood, 2015). In order to conduct crowd verification of credentials proving that the requirements of Article 6(1)(a) are met, the members of the crowd should contact organisations or individuals, which can verify the credentials.

7.1.2 Independence

To ensure the independence of the members of the crowd, a CODR procedure should not allow persons that have actual relationship with the disputants to be a member of the crowd. This can be achieved by adopting rules for independence and incorporating them in the CODR procedure. It means that the CODR procedure should automatically find any relationship between the crowd and the disputants that can question the independence of the crowd. The CODR procedure should not allocate to a case members of the crowd who are not independent. For instance, in the online auctions, members of the crowd should not be allocated to cases if they have ever had a sale transaction with some of the parties. Using modern technologies, a CODR procedure can be designed in such a way that it will automatically: (1) detect relationships between members of the crowd; and (2) disallow members of the crowd who lack independence from participating in CODR cases.²

1 See the website “sbv improver” available at <https://sbvimprover.com/challenge-3/videos-and-seminars/tutorials/online-crowd-verification> (last visited Jan. 3, 2017).

2 For instance, the ECRF automatically finds relations between the members of the crowd and the seller. When the ECRF finds such a relation it does not allocate the member of the crowd to the case.

7.1.3 Impartiality

The best way for ensuring impartiality in a CODR procedure is to restrict the members of the crowd from identifying cases in which they have interest. This will prevent the crowd from basing its decision on internal prejudices, prejudgements, or predispositions towards one of the parties. We propose four ways for restricting the members of the crowd to identify the case in which they have interest.

First, the members of the crowd that wish to participate in CODR should be able to do that without having an opportunity to choose the case, which they will solve. It means that if they express their willingness to participate in the CODR procedure, they will have to solve a randomly selected case.³ This will prevent the members of the crowd from choosing cases in which they have interest. So, a random procedure is recommended.

Second, in order to decrease the chance of “searching for the right case” through “solving other cases”, the members of the crowd can have the right to participate only a limited number of times in the CODR procedure. The ECRF allows the eBay members to vote as much as they can but if the CODR procedure has to resolve a small amount of cases, a requirement for a maximum number of votes per month or per day can be helpful. However, restricting the crowd from participating multiple times in the dispute resolution process will perhaps decrease the amount of the members of the crowd. In turn, less members of the crowd can lead to a delayed decision or even a decision that is never rendered. Therefore, the balance between ensuring impartiality by restricting the members of the crowd to vote several times and ensuring the operability of the procedure by providing a sufficient number of members of the crowd is necessary and recommended.

Third, a problem arises, if only a few cases that need to be resolved are in the CODR platform. In this case, the members of the crowd will be able to pick the case in which they have interest after participating in all other cases if any. Even if they have the right to participate in the CODR procedure only one or a few times, they can motivate other members of the crowd to participate in the procedure in order to render an unfair decision or register several times with different accounts in order to manipulate the outcome of the decision. A solution of this problem can be the creation of a large number of “fake cases”, which aim will be to prevent members of the crowd from picking cases in which they have interest. The amount of the “fake cases” should be sufficient in order to guarantee that the members of the crowd will not be able to identify and participate in a case in which they have interest. The “fake cases” can be also used for analysing the fairness of the procedures and taking measures for ensuring it. For instance, a case which decision is

3 Randomly allocation of the members of the crowd to the case is one of the safeguards used by the ECRF. See Community Court FAQs, <http://www.ebaycourt.com/cc/FAQ.jsf>. The archived webpage is available at <https://web.archive.org/web/20111213132628/http://www.ebaycourt.com/cc/FAQ.jsf> (last visited Jan. 3, 2017).

obvious can be given to the crowd for a solution and, subsequently, can be used not only to show how fair the process of dispute resolution is but also to restrict access to the CODR procedure to members of the crowd that make a certain number of unfair decisions. So, we recommend the use of “fake” cases when the number of cases is quite low.

Fourth, all personal information that can lead to identification of the disputants and the members of the crowd should be removed.⁴ This is necessary to ensure that the members of the crowd will not contact the parties in order “to sell” their votes and the disputants will not contact the members of the crowd in order to push them to render a certain decision.⁵ For instance, among others, the following information should be removed: the names and the addresses of the disputants; the names and the addresses of the members of the crowd; and the nationality of the the disputants and the members of the crowd. However, removing all information that can lead to identification of the disputants can also lead to removal of information that can influence the outcome of the dispute. It will decrease the fairness of the procedure because the right of the disputants to present their cases will be restricted. This is a complex problem. Our recommendation is that the CODR procedure should be designed in such a way that it will remove any information that can lead to identification of the disputants, while it should not remove any information that can influence the outcome of the dispute resolution process.⁶

7.1.4 Transparency

To make their CODR procedures understandable and possible to replicate, such procedures should be clearly explained. Whether such an explanation is to be laid out in documents called “Rules of Procedure”, “Frequently Asked Questions”, or “Terms and Conditions” is of little importance. What matters is that such an explanation is sufficiently precise and detailed. If the explanation is too sketchy, the CODR procedure will lack transparency and may render arbitrary decisions. With a particular regard to arbitration tribunals rendering self-enforceable decisions, the designers of such tribu-

4 The eBay’s Community court maintains the members of the crowd anonymous. See Community Court FAQs, <http://www.ebaycourt.com/cc/FAQ.jsf>. The archived webpage is available at <https://web.archive.org/web/20111213132628/http://www.ebay-court.com/cc/FAQ.jsf> (last visited Jan. 3, 2017).

5 The removal of personal information can also protect disputants from spam. Such a protection is particularly needed in case of online opinion polls which usually allow anyone to participate in them (see Subsection 3.1.D). Spammers can use the free access to such CODR procedures in order to collect personal information and exploit it for sending spam.

6 Colin Rule, an expert in ODR, noted, in an email sent to us on 5th of January 2017, that the anonymisation of information can be difficult to achieve because the disputants are usually not good at self-censoring their submissions. One solution to this problem is to assign the task of anonymising contributions to crowdsourced workers who have proven skills in data anonymization.

nals must provide clear explanations of the enforcement processes. No such explanations are needed for online opinion polls and online mock jury systems as the decisions rendered by such procedures are not enforced by their operators.

7.1.5 Fair hearing

In this subsection, we will propose ideas for ensuring compliance of CODR with the two sub-elements of the element of fair hearing, namely, (A) ensuring that each party participates in the dispute resolution process and (B) ensuring that each party can present its case and rebut the case of the opponent.

A: Ensuring that each party participates in the dispute resolution process

If a CODR procedure serves a particular online community, a notice informing the disputants about the commencement of the dispute resolution process can be sent through an internal system for sending messages. If the CODR procedure does not serve an online community, one way to send a notice to the defendant is to send a notice to the contact address provided by the disputants. However, the claimant can provide an incorrect address in order to prevent the defendant from participating in the procedure or in order to prevent rendering a decision. He can also provide an incorrect address because of a mistake or because he is not able to search for new contact details or for some other reason. Providing the crowd with an opportunity to make a research and find any possible contact address of the defendant will increase the chance of finding the correct contact address of the defendant.⁷

For example, if the dispute relates to a domain name, the crowd can be entitled to search for the contact information of the defendant on the website associated with the disputed domain name. Under Uniform Domain-Name Dispute-Resolution Policy (UDRP), such searches are conducted by the provider of UDRP services.⁸

7 In an email dated 5th of January 2017, Colin Rule, expert in ODR, informed us about two drawbacks related to providing the crowd with the opportunity to search for the contact details of the defendants. The first drawback is the defendants may not like the fact that unknown people are searching for their contact details. The second drawback is that the crowd may find wrong contact details. These two drawbacks can be mitigated by requiring members of the crowd responsible for searching contact details of the defendants to successfully pass (1) identity checks and (2) exams showing that their research skills are at a satisfactory level.

8 Article 2(a)(c) of the UDRP of the Rules for Uniform Domain Name Dispute Resolution Policy states that achieving notice requires the submission of a notice to email addresses or email links shown on a webpage associated with the disputed domain name. See <https://www.icann.org/resources/pages/udrp-rules-2015-03-11-en> (last visited Jan. 3, 2017).

By using crowd searching, the designers of CODR procedures can easily assign the task of finding the contact details of the defendant to the crowd. It should be noted that crowd searching is used for far more complex legal tasks than searching for contact details. CaseText, for instance, allows the crowd to identify the relationship between two cases. In order to do so, the crowd needs to find the relevant paragraphs of the examined cases, which reveal the interrelationship between them. Afterwards, the crowd should select one of four options, namely, (1) “positive”, (2) “referencing”, (3) “distinguishing”, and (4) “negative”. The option “positive” means that the citing case explicitly approves the reasoning of the earlier case. The option “referencing” means that the citing case simply relies on an earlier case without further argument. The option “negative” means that the citing case overrules, narrows, calls into question the earlier cases or does not find the reasoning of the earlier cases to be persuasive. The crowd may not only choose one of the four options, but also add a brief explanation describing the relationship between the two examined cases. A screenshot of CaseText is provided in Figure 20. The screenshot shows an excerpt from the case *MASS. v. E.P.A.*⁹ The task of the crowd is to identify the relationship between *MASS. v. E.P.A.* and an earlier case, namely, *Sierra Club v. Thomas*.¹⁰ The crowd needs to choose in between one of the aforementioned four options.

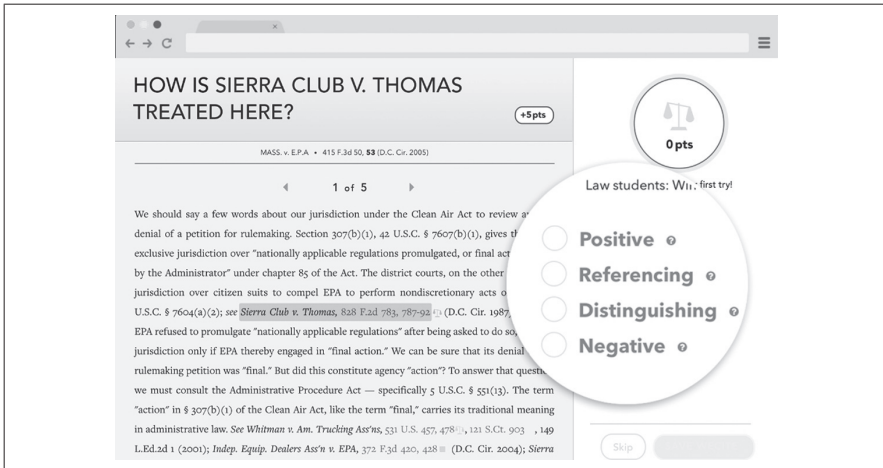


Figure 20. A screenshot of casetext.com

It should be noted, if the crowd can search for the contact details of the defendant, the crowd may contact the defendant to the identified contact details without the knowledge of the claimant. This will threaten the impartiality and the independence of the members of the crowd. Therefore, the crowd, which searches for the contact details of the defendant should not be

9 *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497 (2007).

10 *Sierra Club v. Thomas*, 828 F. 2d 783 (1987).

the same as the crowd which resolves the dispute between the claimant and the defendant.

B: Ensuring that each party can present its case and rebut the case of the opponent

A fair CODR procedure should have rules, which ensure that the disputants are entitled to present their case in front of the crowd and rebut the case of the opponent. However, a problem can arise if some part of the CODR procedure is completed with the participation of certain members of the crowd, but the other part of the procedure is completed with the participation of other members of the crowd. This can infringe the right of each disputant to present their side of the case because a part of the case is presented before another crowd, which will not take the decision. Consequently, the CODR procedure should be organised in such a way as to ensure that either the same crowd participates in the whole process or if there are changes in the composition of the crowd, the crowd that renders the decision will be familiar with all the information presented by the disputants.

7.1.6 Counterpoise

To comply with the element of counterpoise, which is embedded in the Directive on Consumer ADR, CODR procedure should neutralise (A) the existing imbalances in the financial status of the disputants and (B) the computer skills of the disputants.

A: Neutralising the existing imbalances in the financial status of the disputants

To neutralise the existing imbalances in the financial status of the disputants, a CODR procedure should be governed by rules which ensure that: (1) the disputants are not required to hire legal professionals; (2) the disputants are not required to pay more than nominal fees for participating in the procedure; and (3) the disputants are not required to make phone calls if the fees for such calls are more than nominal. It is worth mentioning that no one of the past and existing CODR procedures requires the disputants to hire a lawyer or pay any fees.

B: Neutralising the existing imbalances in the computer skills of the disputants

To neutralise the existing imbalances in the computer skills of the disputants, CODR procedures should be easily accessible online and offline. Thus, disputants having weak or no computer skills will be able to use them.

Designers of CODR procedures can ensure that their procedures are easily accessible online by allowing the disputants to use user-friendly interfaces. A user-friendly interface needs to meet the following seven conditions: (1) be intuitive; (2) allow the disputants to change the settings in accordance with their personal preferences and save them for future use; (3) be predictable and allow the disputants to control their online accounts; (4) appear as a single application rather than a random combination of different applications; (5) allow the disputants to correct mistakes; (6) automatically save the

input of the disputants; (7) allow the disputants to select the desired level of difficulty of interaction (e.g., novice, intermediate, expert) with the interface (cf. Bessonova, Oboznov, Bakanov, 2012, p. 98).

To make CODR procedures easily accessible offline, disputants should be able to interact with each other and with the third neutral party by post. The quick and low-cost processing of a large number of regular mails can be achieved through the use of an automated mail processing (AMP) system. For example, such a system may: (1) read a bar code included in the incoming correspondence; (2) scan the incoming correspondence; and (3) automatically upload the incoming correspondence in a folder which contains all files appertaining to the dispute to which the correspondence relates. An AMP system may allow the operator of the CODR procedure to process thousands of letters per hour. By way of illustration, India Post installed an AMP system, which processes about 40,000 letters every hour (Pandya, 2013, p. 2).¹¹

7.1.7 Ensuring a reasonable length of procedure

A reasonable length of a CODR procedure can be ensured by adopting rules which oblige the third neutral party to deliver a solution or a decision within a fixed time period, which can be extended only in exceptional circumstances. A CODR procedure can enhance the compliance of the third neutral party with this obligation by: (1) sending automatic reminders to the third neutral parties about the approaching procedural deadlines; (2) automatically replacing unresponsive members of the crowd with responsive members of the crowd; (3) imposing sanctions on third neutral parties who do not meet the procedural deadlines; and (4) appointing only one juror to a case if there are not enough members of the crowd.¹² The sanctions may include, for example, temporary prohibitions to participate as a third neutral party in the CODR procedure.

7.1.8 Providing reasons

To provide disputants with reasons about the decisions rendered through CODR procedures, the rules governing such procedures should oblige each member of the crowd to support his vote with reasons.

If the decision in a CODR procedure is made by a large crowd, the CODR procedure can be designed in such a way as to provide the disputants not only with the reasons of individual members of the crowd, but also with a brief summary of all reasons used by the members of the crowd.

11 Colin Rule, an expert in ODR, noted, in an email sent to us on 5th of January 2017, that AMP may be cost efficient only for large scale organizations, such as India Post.

12 In an email sent to us on 21st of December 2016, Pablo Cortés, an expert in ODR, implied that a single panelist with a certified reputation may be able to offer a sustainable CODR procedure.

Such a summary will provide the crowd with a comprehensive picture of the reasons for the decision and, therefore, enhance disputants' perceptions of transparency of the procedure.

A summary of all reasons used by the members of the crowd can be created in at least two ways. First, the summary can use a computer algorithm, which analyses the reasons for the decisions and creates an automatic summary.¹³ In this regard, it should be noted that algorithms for summarising crowdsourcing content already exist. For instance, researchers succeeded to create an algorithm which creates summaries of sport events by using content from Twitter, a crowdsourcing application which allows the members of the crowd to post short messages (cf. Lee, Lee, Jung, Song, 2016, p. 432). Second, the members of the crowd can be required to provide a short summary of the reasons for their decisions. A compilation of all such summaries can be presented to the disputants.

7.1.9 Voluntary participation

For this element to be met, the disputants should not be obliged to participate in the CODR procedure (e.g., on the basis of contractual agreements or legislative acts). This means that the rules governing CODR procedures should not include requirements of attendance and legal sanctions for non-participation. Furthermore, in order to avoid any confusion, the rules should clearly state that the disputants have the right of voluntary participation.

7.1.10 Process control

In order to provide the disputants with the maximum possible process control, the designers of CODR procedures should ensure that the disputants are allowed to present any kind of information. Any limits to the types of information, which can be presented may decrease the perceptions of fairness of the CODR procedure. For example, the ECRF may be perceived as unfair CODR procedure because it does not allow the disputants to upload videos. Video evidence can be a compelling type of evidence in disputes related to modern technologies. This is because it allows the disputants to show to the third parties the process of operation of software, hardware, and websites.

Furthermore, in order to provide the disputants with the maximum possible process control, a CODR procedure may provide the parties with a list of tools which can be used for taking digital evidence and with the opportu-

13 In an email dated 5th of January 2017, Colin Rule, an expert in ODR, explained to us that it is not currently feasible to use algorithms to summarise free-text supplied reasons. He suggests collection of reasons through structured forms, thus allowing the data to be easily used in algorithms.

nity to decide whether to continue with each procedural stage.¹⁴ Such tools may include, for example, a list of freely available digital forensic tools, e.g., tools for digital media acquisition and backup.

7.1.11 Decision control

In the context of negotiation and mediation-based CODR procedures, a high degree of decision control can be ensured by providing the disputants with the opportunity to accept and reject the decisions rendered by those procedures. The disputants in adjudication-based CODR procedures have no decision control because the decision control is transferred to the third neutral party.

Since empirical studies show that outcomes reached by disputants (e.g., mediation settlement) are perceived as more fair than outcomes imposed by a third party, designers of CODR procedures can enhance the perceptions of fairness of their procedures by including mediation procedures in adjudication-based CODR procedures (cf. Conlon, Moon, and Ng, 2002). The combination of mediation and arbitration processes (also known as Med-arb) is not a new phenomenon. Various providers of dispute resolution services, including the International Centre for Dispute Resolution (ICDR), the International Chamber of Commerce (ICC) and the Hong Kong International Arbitration Centre (HKIAC) recognise and support the use of Med-arb (cf. Chua, 2015). In this regard, it is interesting to note that an empirical study found that disputants prefer Med-arb proceedings in which the mediation and arbitration is conducted by the same person than *vice versa* (Condliffe, 2012, p. 154). Condliffe (2012, p. 154) notes that there is no clear explanation on the reason of this preference and points out the need for further research in this area.

In the light of the aforementioned observations, we can presume that adjudication-based CODR procedures, which may include online opinion polls, online mock jurors, and arbitration tribunals rendering self-enforceable decisions, will provide more decision control to the disputants if they include mediation prior to adjudication. To further enhance subjective procedural fairness, designers of Med-arb CODR procedures may require the same members of the crowd to conduct both the mediation and arbitration parts of the procedures.

7.1.12 Consistency

To ensure the consistent application of a CODR procedure, the designers of the CODR procedure should (1) require the crowd to take into account previously decided CODR cases, (2) provide the crowd with access to previ-

14 In an email sent to us on 5th of January 2017, Colin Rule, an expert in ODR, noted that the element of process control is not only about collecting evidence, but also about making “the disputants always feel that they are in the drivers’ seat as the dispute moves from step to step.”

ously decided CODR cases, and (3) implement tools for trend analysis and generation of statistical reports.

In order to take into account relevant previously decided CODR cases, the crowd should be able to search in the case archive according to various criteria, e.g., subject, date, and keywords included in the decisions. If the CODR procedure does not provide the crowd with a comprehensive case search function, the crowd may find it difficult to find the relevant cases. This, in turn, may lead to an inconsistent application of the CODR procedure.

iCourthouse is an example of a CODR procedure which does not provide the crowd with a comprehensive search function. The case search interface of iCourthouse contains a list of pages with summaries of cases. Figure 21 is a screenshot of the case search interface of iCourthouse. Figure 21 shows links to 123 pages with summaries of cases. Figure 21 also shows four cases which appear on page 33, namely, Case Number 2006-11374, Case Number 2006-11373, Case Number 2006-11372, and Case Number 2006-11371. If a member of the crowd would like to search for a case within certain legal domain (e.g., a contract law), the member of the crowd should browse through all 123 pages in order to find the relevant case.

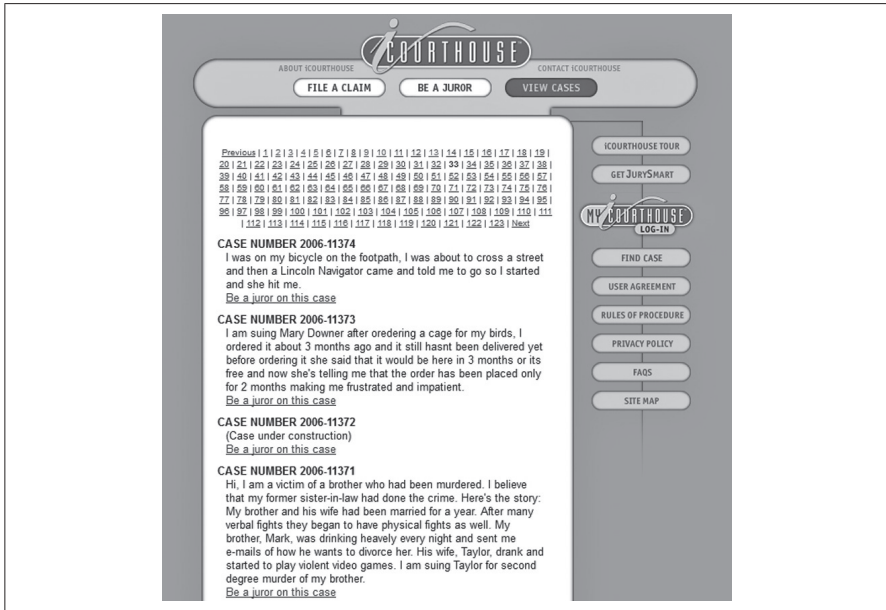


Figure 21. A screenshot of the case search interface of iCourthouse

The Arbitration center for Internet disputes of the Czech Arbitration Court is an example of an ODR platform, which provides its users with a comprehensive search function. More specifically, the ODR platform allows the users to search through various categories of cases. Figure 22 is a screenshot of the case search interface of the Arbitration center for Internet disputes of

the Czech Arbitration Court. Figure 22 shows seventeen boxes, which relate to different categories of cases. There are five main categories. The first one is subdivided into seven classes. The fourth category is subdivided into four classes. The other three categories are not further subdivided.

When the user of the case search interface clicks on one or more of those boxes and, then on a search button, the user will access a list of cases in the selected category.

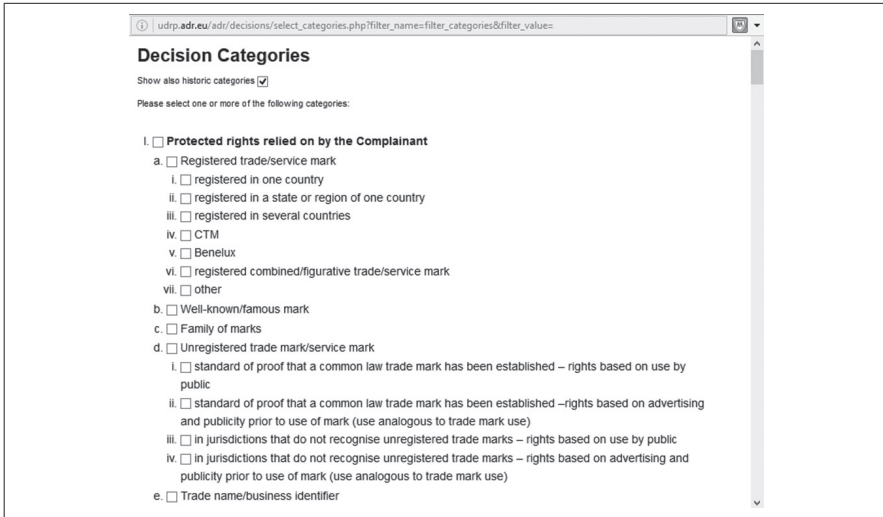


Figure 22. A screenshot of the case search interface of the Arbitration center for Internet disputes of the Czech Arbitration Court

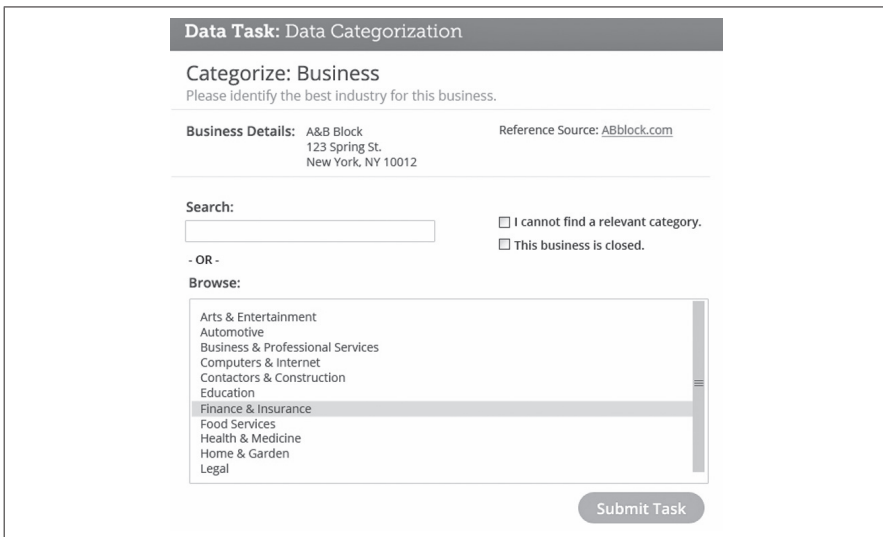


Figure 23. A screenshot of an interface window of the platform “CrowdSource”

The categorisation of CODR decisions can be done by using crowdsourcing. For example, the members of the crowd can categorise CODR decisions by clicking through a category tree, such as the tree used by the Czech Arbitration Court. It is worth mentioning that at least two websites provide crowdsourcing data categorisation services.¹⁵ Figure 23 shows a screenshot of an interface window of the platform “CrowdSource” allowing the crowd to categorise businesses. The interface window on Figure 23 provides the crowd with information about a business, i.e., the name of the business, the address of the business, and a link to the website of the business. The crowd needs to choose one out of eleven categories describing the activities of the business. If the crowd cannot find the relevant category or the business is closed, the members of the crowd must tick an appropriate box.

If, due to a large volume of data, the categorization of data as proposed above is not sufficient for providing the crowd with the opportunity to identify relevant cases, the designers of the CODR platform may attempt to ensure the consistency of the decisions rendered by the CODR platform by implementing tools for (1) trend analysis and (2) generation of statistical reports.¹⁶ These two types of tools will be briefly examined below.

The tools for trend analysis collect information and identify patterns or trends in the information (cf. Zikmund, 2016). For example, such tools can provide the crowd with a description of case law trends related to the dispute at stake. It should be noted that there are existing tools that are used for analysis of large volume of data.¹⁷ By way of illustration, TwitterMonitor (1) detects topic trends published on the micro-blogging website Twitter, (2) identifies and clusters words that appear in high rate, (3) extracts contextual knowledge related to the identified word, and (4) provides descriptions of the identified trends (Vishal, 2013, p. 133).

The tools for generation of statistical reports on the basis of crowdsourcing contributions can be divided in two categories, namely, non-iterative and iterative (cf. Hung, Tam, Tran, Aberer, 2013, p. 2). Non-iterative tools use heuristics to compute a single aggregated value of the contributions of the crowd (cf. Hung, Tam, Tran, Aberer, 2013, p. 2). For example, if the mem-

15 Amazon Mechanical Turk (AMT) and the platform “CrowdSource” allow their users to assign data categorization tasks to the crowd. See the article “How to Create a Categorization Project” published by AMT on <http://docs.aws.amazon.com/AWSMechTurk/latest/RequesterUI/Create-Categorization-Project.html> (last visited Jan. 3, 2017) and the article “Data Categorization” published by CrowdSource on <http://www.crowdsourcing.com/solutions/data-solutions/data-categorization/> (last visited Jan. 3, 2017).

16 Colin Rule, an expert in ODR, stated in an email sent to us on 5th of January 2017, that it is unrealistic to expect the members of the crowd to rely on previous case law for their decisions because the examination of case law may require a lot of time. Guidelines created on the basis of trend analysis and statistical reports can be a solution to this issue.

17 Google Trends (www.google.com/trends, last visited Jan. 3, 2017) and Trendistic (www.trendistic.com, last visited Jan. 3, 2017) are two notable tools for identifying trends. Google Trends identifies trends on the basis of data from the web, whereas Trendistic identifies trends on the basis of data from the micro-blogging service Twitter (www.twitter.com, last visited Jan. 3, 2017).

bers of the crowd resolve identical cases, the solution proposed in the majority of the cases will be selected as the single aggregated value of all solutions to those cases. Iterative tools aggregate crowdsourcing contributions by (1) taking into account the expertise of the members of the crowd who answer that question (2) adjusting the expertise of each member of the crowd depending on the answers given by him (cf. Hung, Tam, Tran, Aberer, 2013, p. 2). By using iterative tools to generate statistics of CODR decisions, the designers of a CODR procedure may ensure that the opinion of members of the crowd having relevant expertise will have more weight on the statistics than the opinion of members who lack such expertise. The tools for trend analysis and generation of statistical reports can benefit online opinion polls and arbitration tribunals rendering self-enforceable decisions by increasing the consistency of their decision-making processes. The tools mentioned in the preceding sentence can benefit online mock jury systems by providing the lawyers who want to test their cases with (1) information about latest trends in the case law related to their cases as well as (2) statistical reports about the outcome of similar mock cases.

7.1.13 Accuracy

In order to ensure that the information provided by the disputants is correct, a CODR procedure can enable the members of the crowd to verify the accuracy of the information presented by the disputants.¹⁸ More particularly, the crowd can be allowed to verify alleged facts presented by the disputants.¹⁹ Below, we discuss three situations in which the crowd can be used for verifications of facts. First, by using Google Maps (a desktop web mapping service developed by Google), the crowd can verify whether a claimant who was allegedly bitten by a dog in claimant's backyard has a backyard. Second, by using web.archive.org (a database of archived webpages), the crowd can verify whether the defendant has published on his website fraudulent pre-contractual misrepresentations before the conclusion of a contract with the claimant. If the crowd finds that the fraudulent pre-contractual misrepresentations were published on the website of the defendant before the conclusion of the contract, the claimant may be entitled to damages (depending on the jurisdiction).²⁰ Third, by using publicly available online forensic tools, the crowd can verify the authenticity of photos published by the disputants. For example, in order to verify the authenticity of photos, the crowd can use

18 The concept of crowd verification has been discussed in Subsection 7.1.1.

19 In an email dated 5th of January 2017, Colin Rule, an expert in ODR, explained to us that jurors may not have the skills necessary for such a verification. To address this drawback, CODR should be designed in such a way as to ensure that only members of the crowd having good information verification skills should be responsible for verifying alleged facts presented by the disputants.

20 For example, in Australia, an action for damages for fraud (the tort of deceit) lies against the author of pre-contractual fraudulent misrepresentations (Barton, 2013).

the publicly available tool “Izitrū”.²¹ After uploading a photo on “Izitrū”, the tool will use six different forensic tests to analyse the authenticity of the photo. If the photo passes all six tests, “Izitrū” will issue a certificate indicating that the photo has not been edited.

7.1.14 Correctability

Correctability of CODR decisions can be guaranteed by allowing the disputants to appeal the decisions. The appeal procedure can be either a CODR procedure or an ODR procedure.²² If the appeal procedure is a CODR procedure, it should be designed in such a way as to prevent the members of the crowd who participated in making the appealed decision from making an appeal decision. This will ensure that, if some or all of the members of the crowd who made the first decision are not impartial or independent, those members of the crowd would not be able to make the appeal decision. This principle is used in various courts, including the International Criminal Court (ICC).²³

In order to ensure that the members of the crowd in the first instance are not the same as the members of the crowd in the appeal, the designers of the CODR procedure may implement automatic checks, similar to the checks conducted by the ECRF. As it has been mentioned before, the ECRF would automatically prevent a juror from being allocated to a case if (1) he had had a transaction with either the buyer or the seller or (2) if he had once voted on a case in which the buyer or the seller was/were already involved.

It should be noted that only adjudication-based CODR procedures, which may include online opinion polls, online mock jury systems, and arbitration tribunals rendering self-enforceable decisions, can ensure the correctability of their decisions. In contrast, negotiation and mediation-based CODR procedures, which may include certain online opinion polls (e.g., PeopleClaim), do not need to ensure the correctability of their decisions as they do not render decisions.

21 See www.izitru.com (last visited Jan. 3, 2017).

22 Irrespective of the type of the chosen appeal procedure, it is preferable if the procedure is specially designed as an appeal procedure. This is because the idea of appealing a decision by using the procedure used for rendering that decision is not common in the field of dispute resolution. For instance, in the U.S., challenges to district court decisions should be addressed to appellate courts, whereas the U.S. Supreme court hears challenges to appellate court decisions. See article “Court Role and Structure” published by the Administrative Office of the U.S. Courts on behalf of the Federal Judiciary on <http://www.uscourts.gov/about-federal-courts/court-role-and-structure> (last visited Jan. 3, 2017).

23 See the official website of the International Criminal Court available at <https://www.icc-cpi.int/Pages/Appeal.aspx> (last visited Jan. 3, 2017). See also Article 22(1)(5) of the Bulgarian civil procedure code (ГРАЖДАНСКИ ПРОЦЕСУАЛЕН КОДЕКС) which states that a judge cannot decide a case if he/she participated in deciding the case in another judicial instance. Article 341(5) of the French Code of Civil Procedure (code de procédure civile français) states that the disputants may request the recusal of a judge if he/she, previously, heard and determined the matter as a judge or an arbitrator.

7.1.15 Ethicality

The designers of a CODR procedure can ensure the maximum extent of ethicality of a procedure by (1) conducting empirical studies aiming to investigate the personal ethical standards of the members of the crowd and (2) implementing the personal ethical standards of the majority of the members of the crowd in the CODR procedure. The personal ethical standards of the majority of the members of the crowd can be implemented in CODR in two ways.

First, they can be implemented in the rules of the procedure. For example, in order to ensure ethicality of the procedure from the point of view of disputants and members of the crowd in the Middle East, the rules may state that the case should be decided on the basis of sharia, i.e., Muslim ethical principles (cf. Selby, 2012, p. 14).

Second, the personal ethical standards of the majority of the crowd can be implemented in formal codes of ethics which state the values and ethical principles the members of the crowd are expected to display. Ethical codes can get specific to the point of offering guidelines on how the crowd should behave in situations susceptible to ethical dilemmas, such as whether or not the crowd should follow the rules of the procedure which the crowd considers to be unjust.

It should be noted that ethical codes are used by many organisations, including private companies (cf. Schermerhorn, Jr, 2009, p. 60). For example, Gap Inc., an American worldwide clothing and accessories retailer, has adopted a formal Code of Vendor Conduct which sets out ethical standards to which the factories supplying clothes for Gap Inc. should comply. By way of illustration, the Code of Vendor Conduct obliges the factories to provide the workers in the factories with “a safe and healthy environment” and hire them “on the basis of their ability to do the job, not on the basis of their personal characteristics or beliefs” (see Schermerhorn, Jr, 2009, p. 60).

7.2 CHAPTER SUMMARY

In this section, we provided a brief summary of our model of a fair CODR procedure, which consists of fifteen elements. Below, we summarise each of those fifteen elements (A-O) for a brief overview of the essence of the elements.

A: Expertise

To comply with this element, CODR procedures should include (1) rules which allow only members of the crowd having the required expertise to participate in CODR and (2) screening processes aiming to find out whether the members of the crowd comply with those rules. The screening processes may consist of the following three steps: (1) completion of an online application; (2) taking a short subject matter test; and (3) crowd verification of credentials.

B: Independence

The independence of the members of the crowd can be achieved by designing CODR procedures which automatically: (1) find any relationship between the members of the crowd and the disputants; and (2) make sure that a member of the crowd who has a relationship with either disputant will not be allocated as an adjudicator or a mediator.

C: Impartiality

We propose four solutions to safeguard the impartiality of the members of the crowd, namely, (1) restricting the members of the crowd from the opportunity to choose the cases which they will solve, (2) providing the members of the crowd with the right to participate only limited times in the CODR procedure, (3) creation of a large number of “fake cases”, which aim to prevent members of the crowd from picking cases in which they have interest, and (4) removing all personal information that can lead to identification of the parties.

D: Transparency

Disputants should be provided with a clear, sufficiently precise, and detailed explanation of the CODR procedure.

E: Fair hearing

To secure the right of each party to participate in the dispute resolution process, the members of the crowd should have the opportunity to conduct a research and find any possible contact details of the defendant. To make sure that each party can present its case and rebut the case of the opponent, either the same crowd should participate in the whole CODR process or, if there are changes in the composition of the crowd, the crowd that renders the decision should be familiar with all the information presented by the disputants.

F: Counterpoise

To neutralise financial inequalities, a CODR procedure should not oblige the disputants to hire legal professionals and/or pay more than nominal legal fees. To neutralise computer skills inequalities, a CODR procedure should have a user-friendly interface and be accessible offline.

G: Ensuring a reasonable length of procedure

The outcome of a CODR procedure should be announced within a pre-defined fixed time period, which can be extended only in exceptional circumstances. To safeguard the timely delivery of the outcome, the CODR procedure should (1) send automatic reminders to the third neutral parties about the approaching procedural deadlines and (2) impose sanctions on third neutral parties who do not meet the procedural deadlines.

H: Providing reasons

A CODR procedure should provide the disputants with reasons supporting each vote of the members of the crowd and, if the decision is rendered by a large number of members of the crowd, with a brief summary of all reasons used by the members of the crowd.

I: Voluntary participation

The disputants should not be subject to any mandatory participation requirements.

J: Process control

A high degree of process control requires that the disputants are (1) allowed to present any kind of information and (2) provided with a list of tools which can be used for taking digital evidence.

K: Decision control

A high degree of decision control requires that the disputants are provided with the opportunity to accept and reject the decisions rendered by negotiation and mediation-based CODR procedures. The inclusion of mediation procedures in adjudication-based CODR procedures will provide the disputants using such procedures with a degree of decision control which, in turn, will enhance disputants' perceptions of fairness of the procedures.

L: Consistency

Consistency in a CODR procedure can be ensured by (1) requiring the crowd to take into account previously decided CODR cases and (2) providing the crowd with access to such cases.

M: Accuracy

The accuracy of the information provided by the disputants can be ensured by providing the members of the crowd with the opportunity to verify the information presented by the disputants.

N: Correctability

Correctability of CODR decisions can be guaranteed by the allowing the disputants to appeal the decisions.

O: Ethicality

The compliance of a CODR procedure with the component of ethicality requires (1) conducting empirical studies aiming to investigate the personal ethical standards of the member of the crowd and (2) implementing the personal ethical standards of the majority of the members of the crowd in the CODR procedure.

In this chapter, we provide answers to the three research questions (Section 8.1). Next, we answer the problem statement (Section 8.2). Afterwards, we explain how this research contributes to the body of work already performed in the area of CODR (Section 8.3) and present proposals for future research (Section 8.4).

8.1 ANSWERS TO THE RESEARCH QUESTIONS

RQ1: In what way does CODR differ from other dispute resolution schemes?

In order to answer RQ1, we provided a framework of CODR and analysed the differences between CODR and other dispute resolution schemes. We found that CODR differs from other dispute resolution procedures in using a crowd for facilitating or resolving disputes. We defined the crowd participating in CODR as a group of people who participate in the dispute resolution process through an open call (see Section 4.2). Furthermore, we specified two requirements which must be met to classify a call to participate in CODR as “open” (See Subsection 2.1.1). The first requirement is that everyone from the online community where the call is published should be entitled to participate in CODR, provided that the candidate meets certain conditions. The second requirement is that it should be published or made available in such a way that every member of the online community where the open call is published should be able to find information about it.

RQ2: What is procedural fairness in the context of adjudicative dispute resolution?

There can be different interpretations of procedural fairness in dispute resolution. As Lord Nicholls of Birkenhead rightly pointed out: “Fairness, like beauty, lies in the eye of the beholder”.¹ Therefore, we decided to present our own interpretation of procedural fairness. It is established by supplementing our interpretation of objective procedural fairness with our interpretation of subjective procedural fairness. We briefly characterise both interpretations. The objective procedural fairness refers to compliance of a procedure with a standard whereby the procedure is assessed by an individual or an organisation as fair or unfair (see Section 1.3). Subjective procedural fairness refers to an individual’s subjective perception of fairness of a procedure (see Section 1.3).

1 *White v White*, [2001] 1 A.C. 596.

We based our interpretation of objective procedural fairness on the EU Directive on ADR because of two reasons. First, the Directive is appropriate for assessing the fairness of CODR procedures because it establishes a standard of fairness applying to ADR procedures, which include CODR procedures. Second, by making our model of CODR compliant with a law having a wide territorial scope (i.e., the entire European Union), we will increase the practical applicability of the model. Our interpretation of subjective procedural fairness is based on studies in the field of social psychology, which examine perceptions of procedural fairness (see Section 5.2).

We identified nine elements of objective procedural fairness, namely, expertise, independence, impartiality, transparency, fair hearing, counterpoise, ensuring a reasonable length of procedure, providing reasons, and voluntary participation (see Section 5.1). We also identified six elements of subjective procedural fairness, which do not overlap with the elements of objective procedural fairness (see Section 5.2). These six elements are as follows: process control, decision control, consistency, accuracy, correctability, and ethicality (see Section 5.2). Hence, for the purposes of this research, our interpretation of procedural fairness consists of fifteen elements.

RQ3: Are the past and present CODR procedures fair?

To answer this research question, we selected three CODR procedures and assessed their compliance with our interpretation of procedural fairness. The three selected procedures are iCourthouse, JuryTest, and the ECRF. Their selection was based two criteria, namely, (1) availability of documents explaining the examined procedures and (2) use of adjudication for resolving disputes (see Section 6.1). After assessing the compliance of the three CODR procedures with our interpretation of procedural fairness, it became clear that none of these procedures comply with all elements of our interpretation of procedural fairness (see Section 6.2). While the ECRF complies with nine of the examined elements, iCourthouse and JuryTest comply with seven elements. It should be pointed out, however, that an objective assessment of ethicality is not possible because ethical and moral standards vary across people.

8.2 ANSWER TO THE PROBLEM STATEMENT

PS: Can a CODR procedure resolve disputes in a procedurally fair way?

In Chapter 7, we presented a model of a CODR procedure that complies with our interpretation of procedural fairness. The model consists of fifteen elements, each of which corresponds to one of the elements of our interpretation of procedural fairness. Each element of the model can be practically implemented in CODR procedures by using legal and/or technological solutions. For example, to comply with the element of correctability, the designer of a CODR procedure can use a legal solution only and, more specifically, the insertion of a clause in the terms and conditions governing the procedure, which states that procedural outcomes can be appealed. However, to comply

with the element of ensuring a reasonable length of procedure, the designers of CODR procedures need to use a technological solution, i.e., a software application, which sends automatic reminders to third neutral parties.

The direct answer to the PS is that a CODR procedure which implements our model can fairly resolve disputes, at least within the meaning of our interpretation of procedural fairness.

8.3 CONTRIBUTIONS

The present thesis aims to contribute to the existing academic debate by providing a better understanding of the relationship between CODR and procedural fairness. We did so by four activities. (A) We identified and described the building blocks of CODR, (B) we provided our own interpretation of procedural fairness, (C) we assessed the compliance of three CODR procedures with our interpretation of procedural fairness, and (D) we provided a model of a CODR which complies with our interpretation of procedural fairness (D). These contributions are summarised below.

A: Identifying and describing the building blocks of CODR

While CODR was analysed in previous publications, this thesis provided the first comprehensive analysis of the building blocks of CODR. This had not been done in earlier publications. The building blocks identified by us can be used as a base for academic debate as well as for designing new CODR procedures.

B: Our own interpretation of procedural fairness

Although many interpretations of procedural fairness exist, our interpretation is the first to merge objective and subjective procedural fairness. Thus, CODR procedures implementing our interpretation of procedural fairness will not only comply with legal procedural requirements (objective procedural fairness), but will also be perceived by the disputants as fair (subjective procedural fairness).

C: Assessment of the compliance of three CODR procedures with our interpretation of procedural fairness

This thesis is the first academic work which examines the compliance of three CODR procedures with (1) an interpretation of objective procedural fairness based on the requirements of the Directive on Consumer ADR and (2) the interpretation of subjective procedural fairness.² The findings of the assessment provide the designers of the examined procedures with valuable feedback which can be used by them to improve their procedures.

2 We note that one of our previous works (Van den Herik and Dimov, 2011b) examined the compliance of the ECRF with the requirements of due process.

D: A model of a CODR, which complies with our interpretation of procedural fairness

In this thesis, we provided the first model of a fair CODR procedure. The model can be implemented by designers of new CODR procedures who want to create procedures, which are legally compliant and perceived as fair by the disputants. The model can also be used by researchers as a base for generating more ideas on how to ensure the compliance of CODR with our and other interpretations of procedural fairness. It should be noted that two ODR experts (Pablo Cortés and Colin Rule) have positively evaluated the model.³

8.4 FUTURE RESEARCH

Future research in the field of CODR needs to be focused in at least eleven directions, namely, (A) integrating CODR in online platforms which generate a large number of disputes, (B) implementing artificial intelligence technologies in CODR, (C) integrating CODR with crowdsourcing applications, (D) use of virtual reality in CODR, (E) measuring perceptions of fairness among disputants using current CODR procedures, (F) examining the procedural fairness of all CODR procedures, (G) developing and evaluating a CODR platform implementing our model of a fair CODR procedure, (H) assessing the distributive fairness of CODR procedures, (I) exploring the potential of case-based reasoning (CBR) for ensuring procedural fairness of CODR procedures, (J) identifying the measures for satisfying the elements of our interpretation of procedural fairness, and (K) investigating the potential use of computational models of argumentation for ensuring procedural fairness of CODR procedures. An illustration of each of these eleven directions follows.

A: Integrating CODR in online platforms which generate a large number of disputes
Global online job market places, social networks, and virtual worlds generate a large number of disputes. The potential of CODR to resolve such disputes was examined in Subsection 4.4.1. More research is required to bring the ideas in Subsection 4.4.1 down to the level of practical implementation.

B: Implementing artificial intelligence technologies in CODR

Artificial intelligence technologies can facilitate the resolution of disputes through CODR. For example, the following two areas of artificial intelligence could be interesting for CODR: (1) automated summarising and (2) intelligent agents. With regard to automated summarising, summaries from the decisions of the crowd can be provided to the disputants. Thus, it would not be necessary for the disputants to read every decision from the members of a large crowd. Pertaining to intelligent agents, it should be noted that they can

3 This happened in personal email communication by Pablo Cortés (21 December 2016) and by Colin Rule (5 January 2017).

be used to: (1) keep track of deadlines; (2) organise the documents of the case; (3) contact the disputants and members of the crowd; and (4) scrutinise the cases and send them to members of the crowd who have sufficient expertise.

C: Integrating CODR with crowdsourcing applications

There is a large number crowdsourcing applications (cf. Hung, Thang, Weidlich, Aberer, 2015). Such applications are used for various purposes, including, but not limited to, data mining, data acquisition, information extraction, information retrieval, and data integration (cf. Hung, Thang, Weidlich, Aberer, 2015). More research is needed on the implementation of such applications in CODR procedures. By way of illustration, more research is needed on the integration of CODR with crowdsourced e-discovery applications, such as CrowdFlower.⁴ By allowing the quick discovery of evidence, such applications will facilitate the resolution of CODR disputes. It is worth mentioning that CrowdFlower can collect over 15,000 unique relevance judgments on nearly 3,000 documents within 24 hours (see Philipis, 2011).

D: Use of virtual reality in CODR

A lack of direct contact between the disputants and a mediator may lead to problems with creating appropriate mental connections and result in lack of will to settle disputes amicably (Mania, 2015). The use of virtual reality in CODR will allow members of the crowd acting as mediators to have a direct contact with disputants, thus building a high level of trust in disputants. Up until the present moment, there are no publications on how to implement virtual reality in CODR in practice.

E: Measuring perceptions of fairness among disputants using current CODR procedures

Although we are aware that hundreds of thousands of disputants use CODR, there are no studies measuring the fairness perceptions of disputants in CODR procedures (cf. Erickson and Wang, 2014).⁵ Such measurements will allow designers of CODR procedures to identify and address elements of subjective procedural fairness which have not been identified yet and, as a result, enhance the subjective procedural fairness of their CODR procedures.

F: Examining the procedural fairness of all CODR procedures

This research examined the procedural fairness of three CODR procedures only, namely, iCourthouse, JuryTest, and the ECRF. An examination of the other CODR procedures will provide valuable scientific information on CODR that will underpin the future development of CODR.

4 E-discovery can be defined as discovery in dispute resolution proceedings, where the information sought is in electronic format (cf. Henseler, 2010). For more information on CrowdFlower, see <https://www.crowdflower.com/> (last visited Jan. 3, 2017).

5 Taobao User Dispute Resolution Center alone resolved 238,000 online-shopping disputes in 2013.

G: Developing and evaluating a CODR platform implementing the model of a fair CODR procedure proposed in this work

Ebner and Zeleznikow (2015, p. 159) note that, to become a more mature domain, Online Dispute Resolution must develop not only theoretical models, but also implement practical solutions. In our opinion, the same applies to the field of CODR. For example, a CODR platform implementing our model of a fair CODR procedure can be used for evaluation of whether the proposed model, including the proposed technological measures, can ensure practical compliance with the requirements of procedural fairness identified by us. Depending on the findings of the evaluation, our model of a fair CODR procedure may need to be adjusted in order to ensure such a compliance.

H: Assessing the distributive fairness of CODR procedures

While this work examined in detail the procedural fairness of CODR procedures, there is no research on the distributive fairness of CODR procedure. Such research is necessary for assessing the perceptions of distributive fairness of CODR procedures. Negative perceptions of distributive fairness may hamper the development of CODR procedures as they may adversely affect disputant's attitudes towards the procedures.⁶

I: Exploring the potential of case-based reasoning (CBR) for ensuring procedural fairness of CODR procedures

Case-based reasoning (CBR) is an approach to problem solving that relies on previously solved problems to resolve new problems (cf. Maher, Balachandran, Zhang, 2014). For example, CBR can ensure the consistency of CODR decisions by identifying patterns of CODR cases and providing the crowd responsible for resolving those cases with previously decided cases which contain the identified patterns. More research is required to determine whether and how CBR can be used to effectively ensure fairness of CODR procedures.

J: Identifying the measures for satisfying the elements of our interpretation of procedural fairness

In this thesis, we proposed a number of legal and technological measures for satisfying the elements of our interpretation of procedural fairness. More research is necessary for identifying measures which are more effective than the measures proposed in this work. One of the first steps of such a research should be the assessment of whether each of the elements can be better satisfied by legal measures or by technological measures. The research on elements that can be better satisfied by legal measures will fall mainly within the scope of the legal domain, whereas the research on elements that can be

6 Schminke, Ambrose, and Noel (1997, p. 1191) note that individuals' perceptions of distributive fairness affect their behaviours and attitudes.

better satisfied by technological measures will fall mainly within the scope of technology-oriented scientific domains (e.g., informatics).

K: Investigating the potential use of computational models of argumentation for ensuring procedural fairness of CODR procedures

Computational models of argumentation is a research discipline falling within the ambit of artificial intelligence (Cerutti, Oren, Strass, Thimm, and Vallati, 2014, p. 459). It studies the imitation of human decision-making process by modelling reason against or for certain decisions (cf. Toniolo, 2016). Researchers in the field of computational models of argumentation have shown that distributed argumentation patterns that appear in various places on the Web can be used for visualisation and comparison of decision rationale (Schneider, Groza, Passant, 2013, pp. 159-160). More research is needed to examine whether distributed argumentation patterns that appear in CODR decisions can be visualised and compared. If this is possible, designers of CODR procedures can enhance the consistency of CODR decisions by providing the members of the crowd with visualized comparisons of CODR decisions.

References

BULGARIAN

1. Alexandrov, A., 'Докога в XXI в. записите от камерите няма да са доказателство', CEFA, 6 June 2015. Available at <http://www.segabg.com/article.php?id=754757> (last visited Jan. 3, 2017).

DUTCH

2. Jongbloed, A., and Nakad-Weststrate, H., 'E-Court: geschillenbeslechting over de digitale snelweg', *TvPP*, 2010, pp. 48-51.
3. Van den Herik, J., and Dimov, D., 'Een Crowdsourcing Model voor eBay', in 'Samen Slimmer: Hoe de 'wisdom of crowds' onze samenleving zal veranderen', Kreijveld, M. (Ed.), Stichting Toekomstbeeld der Techniek, April 2012a.
4. Van den Herik, J., and Dimov, D., 'Geschilbeslechting door crowdsourcing', *Tijdschrift conflictantering*, 11 October 2012b.
5. Van den Herik, J., and Kok, J., 'De Innovatieve Kracht van Big Data', *AutomatiseringGids*, 22 November 2013.

ENGLISH

6. 'Disclosure in Investment Arbitration', In: *Investment and Commercial Arbitration – Similarities and Divergences*, Eleven International Publishing, 2010, pp.153-180.
7. Abelson, R., 'Attitude extremity', In: *Attitude Strength: Antecedents and Consequences*, Petty, R., (Ed.), Krosnick, J., (Ed.), Psychology Press, 2014.
8. Adams, W., 'Classifications and Typology', *Encyclopedia of Life Support Systems (EOLSS)*, 2014.
9. Adler, J., Hensler, D., and Nelson, C., 'Simple Justice: How Litigants Fare in the Pittsburgh Court Arbitration Program', Santa Monica, Calif., Rand Institute for Civil Justice, 1983.
10. Aftergood, S., 'Crowd-Sourcing the Treaty Verification Problem', Federation of American Scientists, 2015. Available at <http://fas.org/blogs/secretcy/2015/07/crowd-sourcing/> (last visited Jan. 3, 2017).
11. Afuah, A., 'Business Model Innovation: Concepts, Analysis, and Cases', 2014.
12. Afuah, A., 'Strategic Innovation: New Game Strategies for Competitive Advantage', Taylor & Francis, 2009.
13. Anderson, D., 'Conflict Resolution and Negotiation in Health Care Management', In: 'Burke, R., Friedman, L., 'Essentials of Management and Leadership in Public Health', Jones & Bartlett Publishers, 2011.
14. Anttiroiko, A., and Mälkiä, M., 'Encyclopedia of Digital Government', Idea Group Inc (IGI), 2007.
15. Armstrong, T., 'Crowdsourcing and Open Access: Collaborative Techniques for Disseminating Legal Materials and Scholarship', *Santa Clara Computer and High Technology Law Journal* 26, 2010.
16. Atlas, N., Huber, A., and Trachte-Huber, W., 'Alternative Dispute Resolution: The Litigator's Handbook', American Bar Association, 2000.

17. Avruch, K., and Black, P., 'ADR, Palau, and the Contribution of Anthropology', In: *'Anthropological Contributions to Conflict Resolution'*, Wolfe (Ed.), A. and Yang H., (Ed.), University of Georgia Press, 1996.
18. Bansal, A., *'Arbitration & ADR'*, Universal Law Publishing, 2009.
19. Barfield, W., 'Intellectual Property Rights in Virtual Environment: Considering the Rights of Owners, Programmers and Virtual Avatars', *Akron Law Review* 39(3), 2006.
20. Barker, K., 'MMORPGing – The Legalities of Game Player', *European Journal for Law and Technology*, Vol.3, No.1, 2002.
21. Barnes, P., 'Reality Check: Should we give up on election polling', *BBC News*, 11 November 2016.
22. Barrett-Howard, E., and Tyler, T., 'Procedural justice as a criterion in allocation decisions', *Journal of Personality and Social Psychology* 50(2), pp. 297-304; 1986.
23. Barton, P., 'The Effect of Pre-Contractual Representations', a paper presented at Legalwise Contract Risk Management Seminar Melbourne, 2013.
24. Bazerman, M., *'Negotiation, Decision Making and Conflict Management'*, Edward Elgar, 2005.
25. Beermann, J., *'Administrative Law'*, Aspen Publishers Online, 2010.
26. Benson, V., and Morgan, S., *'Cutting-Edge Technologies and Social Media Use in Higher Education'*, IGI Global, 2014.
27. Benyekhlef, K., and Gelinis, F., 'Online Dispute Resolution', *Lex Electronica* 10(2), 2005.
28. Berkman Center for Internet & Society's Law Lab, 'Meeting Report: Theoretical Aspects of Crowd Sourced ODR', 2009. Available at http://lawlab.org/cODR_Workshop_Report_7-8-09.pdf (last visited Jan. 3, 2017).
29. Bessonova, J., Oboznov, A., and Bakanov, A., 'Ergomaster – The Software solution to ergonomic design of UI', In: *'Advances in Usability Evaluation'*, Rebelo, F., (Ed.), Soares, M. (Ed.), CRC Press, 2012.
30. Bidgoli, H., *'The Internet Encyclopedia'*, John Wiley & Sons, 2003.
31. Bird, R., Reder, M., Darrow, J., Lichtenstein, S., Aresty, J., and Klosek, J., *'CyberLaw: Text and Cases'*, Cengage Learning, 2011.
32. Blake, S., Browne, J., and Sime, S., *'A Practical Approach to Alternative Dispute Resolution'*, Oxford University Press, 2014.
33. Bohlander, M., *'International Criminal Justice: A Critical Analysis of Institutions and Procedures'*, Cameron May, 2007.
34. Bol, S., *'An analysis of the role of different players in e-mediation: the (legal) implications'*, IAAIL Workshop Series – Second International Workshop pp. 23-29, 2005. Available at www.odrworkshoinfo/papers2005/ (last visited Jan. 3, 2017).
35. Bordone, R., 'Electronic Online Dispute Resolution: A Systems Approach--Potential, Problems, and a proposal', *Harv. Negotiation L. Rev.* 175 (3), 1998.
36. Brabham, D., *'Crowdsourcing'*, MIT Press, 2013.
37. Brafman, O., and Beckstrom, R., *'The Starfish and the spider'*, Penguin Group, 2007.
38. Breger, M., Schatz, G., and Laufer, D., *'Federal Administrative Dispute Resolution Deskbook'*, American Bar Association, 2001.
39. Brockner, J., and Wiesenfeld, B., 'How, When, and Why Does Outcome Favorability Interact with Procedural Fairness', In: *'Handbook of Organizational Justice'*, Psychology Press, 2013.
40. Brockner, J., Konovsky, M., Cooper-Schneider, R., Folger, R., Martin, C., and Bis, R., 'Interactive Effects of Procedural Justice and Outcome Negativity on Victims and Survivors of Job Loss', *The Academy of Management Journal* 37(2), 1994.
41. Bueno, T., Roggia, K., and Hoeschil, H., 'Using Crowdsourcing Games Techniques and Similarity Metrics to Improve Legal Ontologies Expansion', In: *'Legal Knowledge and Information Systems: JURIX 2014: The Twenty-Seventh Annual Conference'*, IOS Press, 2014.
42. Camner, L., 'Crowd Arbitration: Crowdsourced Dispute Resolution', *DisputingBlog.com*, 2014. Available at http://www.disputingblog.com/wp-content/uploads/2014/03/TEST_Leonora-Camner_crowdsourcing-arbitration.pdf (last visited Jan. 3, 2017).
43. Carafano, J., *'Wiki at War: Conflict in a Socially Networked World'*, Texas A&M University Press, 2012.

44. Carmichael, M., 'Message for eBay off-target', *Advertising Age*, October 19, 1998.
45. Carper, D., and McKinsey, J., *Understanding the Law*, Cengage Learning, 2011.
46. Carrell, M., and Heavrin, C., *Negotiating Essentials: Theory, Skills, and Practice*, Prentice Hall, 2008.
47. Casoto, P., Dattolo, A., Omero, P., Pudota, N., and Tasso, C., 'Accessing, Analyzing, and Extracting Information from User Generated Contents', Laboratory of Artificial Intelligence, Department of Mathematics and Computer Science, University of Udine, Udine, Italy, 2010. Available at <http://celfi.unimc.it/kappaelle/iscrizione/contributi/Accessing-Analyzing-and-Extracting.pdf> (last visited Jan. 3, 2017).
48. Cavoukian, A., 'Privacy by Design: The 7 Foundational Principles', Information and Privacy Commissioner of Ontario, 2009.
49. Cerutti, F., Oren, N., Strass, H., Thimm, M., Vallati, M., 'A Benchmark Framework for a Computational Argumentation Competition', in: *Computational Models of Argument: Proceedings of COMMA 2014*, IOS Press, 2014.
50. Cho, S. H., *International Commercial Online Dispute Resolution: Just Procedure through the Internet*, ProQuest, 2009.
51. Chua, E., 'A New Dawn for Mediation', Mediate.com, January 2015. Available at <http://www.mediate.com/Mobile/article.cfm?id=11152&type=> (last visited Jan. 3, 2017).
52. Clauson K., Polen H., Kamel Boulos M., Dzenowagis J., 'Scope, completeness, and accuracy of drug information in Wikipedia', *Ann Pharmacother* 42 (12), 2008.
53. Cohen, N., 'Microsoft Encarta Dies After Long Battle with Wikipedia', *New York Times*, 2009. Available at <http://bits.blogs.nytimes.com/2009/03/30/microsoft-encarta-dies-after-long-battle-with-wikipedia/> (last visited Jan. 3, 2017).
54. Condliffe, P., *Conflict in the compact city: preferences and the search for justice*, PhD thesis, Victoria, University, 2012.
55. Condliffe, P., and Zeleznikow, J., 'What Process Do Disputants Want – An Experiment in Disputant Preferences', *40 Monash U. L. Rev.* 305, 2014.
56. Conlon, D., Moon, H., and Ng., K., 'Putting the cart before the horse: The unexpected benefits of arbitrating before mediating', *Journal of Applied Psychology* (87), p. 978-984, 2002.
57. Cook, S., *Complaint Management Excellence: Creating Customer Loyalty through Service Recovery*, Kogan Page Publishers, 2012.
58. Cooke, M., Barker, J., and Lecumberri, M., 'Crowdsourcing in Speech Perception,' In: *Crowdsourcing for Speech Processing: Applications to Data Collection, Transcription and Assessment*, Eskenazi, M. (ed.), Levow, G. (ed.), Meng, H. (ed.), Parent, G. (ed.), and Suendermann, D. (ed.), John Wiley & Sons, 2013.
59. Cortés, P., *Online Dispute Resolution for Consumers in the European Union*, Routledge Research in IT and E-Commerce Law, 2010.
60. Coteanu, C., *Cyber Consumer Law and Unfair Trading Practices*, Ashgate Publishing, 2004 (a).
61. Coteanu, C., *Cyber Consumer Law: State of the Art and Perspectives*, Humanitas, 2005 (b).
62. Couper, M., 'Technology trends in survey data collection', *23(4) Social Science Computer Review* 486-501, 2005.
63. Cutler, B., *Encyclopedia of Psychology and Law*, SAGE Publications, 2007.
64. Daft, R., *Management*, Cengage Learning, 2009.
65. Daly, C., and Fariello, F., 'Transforming through Transparency: Opening Up the World Bank's Sanctions Regime', In: *The World Bank Legal Review: Legal Innovation and Empowerment for Development*, World Bank Publications, 2012.
66. Damer, B., and Hinrichs, R., 'The virtuality and reality of avatar cyberspace', In: *The Oxford Handbook of Virtuality*, Oxford University Press, 2014.
67. De Lange, R., and Mevis, P., 'Constitutional Guarantees for the Independence of the Judiciary', In: *Netherlands Reports to the Seventeenth International Congress of Comparative Law*, Utrecht 2006.
68. Dewar, J., Smith, B., Banks, C., 'Litigants in Person in the Family Court of Australia', a report to the Family Court of Australia, 2000.

69. Dimov, D., 'Privacy Implications of the Internet of Things', *InfoSec Institute*, 14 November, 2013. Available at <http://resources.infosecinstitute.com/privacy-implications-internet-things/> (last visited Jan. 3, 2017).
70. DiPiazza, S.A., and Eccles, R.G., 'Building public trust', Wiley, 2002.
71. Ebner, N., and Zeleznikow, J., 'Fairness, Trust, and Security in Online Dispute Resolution', *Hamline Journal of Public Law and Policy*, Vol. 36, No. 2, 2015.
72. Ebner, N., and Zeleznikow, J., 'No Sheriff in Town: Governance for the ODR Field', *Negotiation Journal*, Vol. 32(4), 2016.
73. Edwards, L., and Wilson, C., 'Redress and Alternative Dispute Resolution in EU Cross-Border E-Commerce Transactions', *International Review of Law, Computers & Technology*, 2007.
74. Ekins, S., Williams, A., and Pikas, C., 'Collaborations in Chemistry', In: 'Collaborative Computational Technologies for Biomedical Research', Ekins, S. (ed.), Hupcey, M. (ed.), Williams, A. (ed.), John Wiley & Sons, 2011.
75. Emerson, R., 'Business law', Barron's Educational Series, 2009.
76. Endicott, T., 'Administrative Law', Oxford University Press, 2011.
77. Epstein, A., 'Sports Law', Cengage Learning, 2012.
78. Erickson, J., and Wang, S., 'How Taobao Is Crowdsourcing Justice in Online Shopping Disputes', July 2014. Available at <http://www2.alizila.com/how-taobao-crowdsourcing-justice-online-shopping-disputes> (last visited Jan. 3, 2017).
79. Erickson, L., Petrick, L., and Trauth, E., 'Hanging with the right crowd: Matching crowdsourcing need to crowd characteristics', Proceedings of the Eighteenth Americas Conference on Information Systems, Washington, August 9-12, 2012.
80. European Commission Recommendation on the principles for out-of-court bodies involved in the consensual resolution of consumer disputes, C(2001) 1016, 04.04.2001.
81. Fadul, J., 'Lessons in Chess, Lessons in Life', Lulu Press, 2008.
82. Fairfield, J., 'Anti-social Contracts: The Contractual Governance of Virtual Worlds', *McGill Law Journal* 427 (53), 2008
83. Farah, Y., 'Critical Analysis of Online Dispute Resolutions: the Optimist, the Realist and the Bewildered', *Computer and Telecommunications Law Review* 11(4), 2005.
84. Feist, G., and Gorman, M., 'Handbook of the Psychology of Science', Springer Publishing Company, 2012.
85. Felstiner, A., 'Working the crowd: Employment and Labour Law in the Crowdsourcing Industry', *Berkeley Journal of Employment and Labor Law*, 32(1), 2011.
86. Fiske, S., Gilbert, D., Lindzey, G., 'Handbook of Social Psychology', John Wiley & Sons, 2010.
87. Folger, R., and Konovsky, M., 'Effects of procedural and distributive justice on reactions to pay raise decisions', *32 Academy of Management Journal*, 1989.
88. Foremski, T., 'Ireland Using Brightidea For Crowdsourcing New Ideas', *Silicon Valley Watcher*, 19 February 2010. Available at http://www.siliconvalleywatcher.com/mt/archives/2010/02/ireland_using_b.php (last visited Jan. 3, 2017).
89. Forte, A., Bruckman, A., 'Why Do People Write for Wikipedia? Incentives to Contribute to Open-Content Publishing', Paper presented at the GROUP '05 workshop 'Sustaining community: the role and design of incentive mechanisms in online system', Sanibel Island, FL, November 6-8, 2005. Available at <http://www.andreaforte.net/ForteBruckmanWhy-PeopleWrite.pdf> (last visited Jan. 3, 2017).
90. Foster, N., and Sule, S., 'German Legal System and Laws', Oxford University Press, 2010.
91. Fox, W., 'International Commercial Agreements: A Primer on Drafting, Negotiating, and Resolving Disputes', Kluwer Law International, 2009.
92. Friend, C., and Singer, J., 'Online Journalism Ethics: Traditions and Transitions', M.E. Sharpe, 2007.
93. Fryxell, G., and Gordon, M., 'Workplace Justice and Job Satisfaction as Predictors of Satisfaction with Union and Management', *32 the Academy of Management Journal* 4, 1989, pp. 851-866.
94. Gagne, M., 'The Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory', Oxford University Press, 2014.

95. Galligan, D., *'Due Process and Fair Procedures. A Study of Administrative Procedures'*, Oxford University Press, 2004.
96. Gavrilova, M., and Monwar, M., *'Multimodal Biometrics and Intelligent Image Processing for Security Systems'*, Idea Group Inc (IGI), 2013.
97. Geerts, S., *'Discovering Crowdsourcing: Theory Classification and Directions for use'*, Technical University Eindhoven, Master's thesis, 2009.
98. Geiger, D., Rosemann, M., and Fielt, E., *'Crowdsourcing Information Systems – A Systems Theory Perspective'*, 22nd Australasian Conference on Information Systems, 2011.
99. Gerber, E., Hui, J., and Kuo, P., *'Crowdfunding: Why People Are Motivated to Post and Fund Projects on Crowdfunding Platforms'*, Northwestern University, Creative Action Lab, 2012. Available at http://www.juliehui.org/wp-content/uploads/2013/04/CSCW_Crowdfunding_Final.pdf (last visited Jan. 3, 2017).
100. Gianetti, D., *'Suffrage and Voting Secrecy in General Elections'*, In: *'Secrecy and Publicity in Votes and Debates'*, Cambridge University Press, 2015.
101. Gibons, J., *'Monkeys with Typewriters: Myths and Realities of Social Media at Work'*, Triarchy Press Limited, 2009.
102. Glushko, B., *'Tales of the (Virtual) City: Governing Property Disputes in Virtual Worlds'*, *Berkeley Technology Law Journal* 22(1), February 2014.
103. Gomm, R., *'Social Research Methodology: a Critical Introduction'*, Palgrave Macmillan, 2008.
104. Goodman, M., and Dingli, S., *'Creativity and Strategic Innovation Management'*, Routledge, 2013.
105. Gopasalm, H., *'Information Technology and E-Governance'*, New Age International, 2009.
106. Göritz, A., *'Incentives in Web Studies: Methodological Issues and a Review'*, *International Journal of Internet Science*, 2006, 1(1), 58-70.
107. Grainer, M., Broetzmann, S., Beinhacker, D., and Grainer, R., *'Online Dispute Resolution: An International Business Approach to Solving Consumer Complaints'*, AuthorHouse, 2015.
108. Grando, M., *'Evidence, Proof, and Fact-Finding in WTO Dispute Settlement'*, Oxford University Press, 2009.
109. Gray, B., *'The philosophy of law: an encyclopedia'*, Taylor & Francis, 1999.
110. Greenberg, J., *'Determinants of perceived fairness of performance evaluations'*, *Journal of Applied Psychology* 71, 1986.
111. Greenwood, M., *'How to Mediate Like a Pro: 42 Rules for Mediating Disputes'*, iUniverse, 2008.
112. Grefen, P., *'Mastering e-Business'*, Routledge, 2010.
113. Grey, T., *'Procedural Fairness and Substantive Rights'*, In: *Due Process (Nomos XVIII)* 182, J.Pennock (Ed.), 1977.
114. Griffin, R., and Moorhead, G., *'Organizational Behavior: Managing People and Organizations'*, Cengage Learning, 2011.
115. Hammond, R., *'Judicial Recusal: Principles, Process and Problems'*, Bloomsbury Publishing, 2009.
116. Harkiolakis, N., and Halkias, D. *'E-Negotiations: Networking and Cross-Cultural Business Transactions'*, CRC Press, 2016.
117. Harris, C., *'Magna Carta and Its Gifts to Canada: Democracy, Law, and Human Rights'*, Dundurn, 2015.
118. Harrower, J., *'Psychology in Practice: Crime'*, Hachette UK, 2001.
119. Heck, S., and Rogers, M., *'Resource Revolution: How to Capture the Biggest Business Opportunity in a Century'*, Houghton Mifflin Harcourt, 2014.
120. Hein, P., *'How the Japanese Became Foreign to Themselves: The Impact of Globalization on the Private and Public Spheres in Japan'*, LIT Verlag Münster, 2009.
121. Henseler, H., *'Network-based filtering for large email collections in E-Discovery'*, *Artificial Intelligence and Law* 18(4), pp 413-430, December 2010. Available at <http://link.springer.com/article/10.1007/s10506-010-9099-3> (last visited Jan. 3, 2017).
122. Hill Bro, R., *'The E-Business Legal Arsenal: Practitioner Agreements and Checklists'*, American Bar Association, 2004.
123. Hong, J., and Park, H., *'User Ratings and Willingness to Express Opinions Online'*, 3(2) *International Journal of Marketing Studies*, 2011.

124. Hörnle, J., *'Cross-Border Internet Dispute Resolution'*, Cambridge University Press, 2009.
125. Horton, P., and Hunt, C., *'Sociology'*, New York, McGraw-Hill Book Co., 1968.
126. Howe, J., *'Crowdsourcing: A Definition'*, June 2006(a). Available at http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html (last visited Jan. 3, 2017).
127. Howe, J., *'The Rise of Crowdsourcing'*, *Wired Magazine*, June 2006 (b). Available at <http://www.wired.com/wired/archive/14.06/crowds.html> (last visited Jan. 3, 2017).
128. Howe, J., *'Why the Power of the Crowd Is Driving the Future of Business'*, *Crown Business*, 15 September 2009.
129. Hugos, M., *'Enterprise Games: Using Game Mechanics to Build a Better Business'*, O'Reilly Media, 2012.
130. Hung, N., Tam, N., Tran, L., Aberer, K., *'An Evaluation of Aggregation Techniques in Crowdsourcing'*, in: *'Web Information Systems Engineering -- WISE 2013'*, Lin, X. (Ed.), Manolopoulos, Y. (Ed.), Srivastava, D. (Ed.), Huang, G. (Ed.), 14th International Conference, Nanjing, China, October 13-15, 2013.
131. Hung, N., Thang, D., Weidlich, M., and Aberer, K., *'Minimizing Efforts in Validating Crowd Answers'*, *SIGMOD '15 Proceedings of the 2015 ACM SIGMOD International Conference on Management of Data*, 2015.
132. ICC Rules of Arbitration. Available at http://www.iccwbo.org/uploadedFiles/Court/Arbitration/other/rules_arb_english.pdf (last visited Jan. 3, 2017).
133. Ivkovich, S., and Hagan, J., *'Reclaiming Justice: The International Tribunal for the Former Yugoslavia and Local Courts'*, OUP USA, 2011.
134. Jackson, K., *'The Art of Solving Problems'*, Hodder and Stoughton, 1977.
135. Jackson, R., and Sorensen, G., *'Introduction to International Relations: Theories and Approaches'*, Oxford University Press, 2007.
136. Jackson, T., *'International Management Ethics: A Critical, Cross-cultural Perspective'*, Cambridge University Press, 2011.
137. Jaishankar, K., and Ronel, N., *'Global Criminology: Crime and Victimization in a Globalized Era'*, CRC Press, 2013.
138. Johnson, M., *'Law'*, Lotus Press, 2005.
139. Jurca, R., and Faltings, B., *'Incentives for expressing opinions in online polls'*, EC '08 Proceedings of the 9th ACM conference on Electronic commerce 119-128, 2008.
140. Kapardis, A., *'Psychology and Law: A Critical Introduction'*, Cambridge University Press, 2010.
141. Kaplan, G., *'Executive Guide to Managing Disputes'*, Beard Books, 2009.
142. Kaplow, L., and Shavell, S., *'Fairness versus welfare'*, Harvard University Press, 2009.
143. Katsch, E., & Rifkin, J., *'Online Dispute Resolution: Resolving Conflicts in Cyberspace'*, San Francisco: Jossey-Bass, 2001.
144. Katsh, E., *'Online Dispute Resolution: Moving Beyond Convenience and Communication'*, In: *'The ABA Guide to International Business Negotiations: A Comparison of Cross-cultural Issues and Successful Approaches'*, Silkenat, J. (Ed.), Aresty, J. (Ed.), Klosek, J. (Ed.), American Bar Association, 2009.
145. Katsh, E., *'Online Dispute Resolution'*, In: *'The Handbook of Dispute Resolution'*, Moffitt (Ed.), Bordone (Ed.), John Wiley & Sons, 2012.
146. Katsh, E., Rabinovich-Einy, O., *'Lessons from Online Dispute Resolution for Dispute Systems Design'*, In: *'Online Dispute Resolution Theory and Practice'*, Wahab, M., Katsh, E., Rainey, D., (Eds.), Eleven International Publishing, the Hague, the Netherlands, March 2013.
147. Katsh, E., Rifkin, J., and Gaitenby, A., *'E-Commerce, E-Dispute, and E-Dispute Resolution: In the shadow of "eBay Law"'*, *15 Ohio State Journal on Dispute Resolution* 705, pp. 728-729, 2000.
148. Kaufmann-Kohler, G., Schultz, T., *'Online Dispute Resolution: Challenges for Contemporary Justice'*, Kluwer Law International, 2004.
149. Kelly, D., Slapper, G., *'Sourcebook on English Legal System'*, Routledge, 2012.
150. Kennedy, D., and Mighell, T., *'The Lawyer's Guide to Collaboration Tools and Technologies: Smart Ways to Work Together'*, American Bar Association, 2008.
151. Khosrowpour, M., *'Collaborative Information Technologies'*, Idea Group, 2002.

152. Kim, A., *'Community Building on the Web'*, Peachpit Press, 2000.
153. King, I. and Li, W., 'Facial Expression Synthesis Using Radial Basis Function Networks', In: *'Intelligent Biometric Techniques in Fingerprint and Face Recognition'* Lakhmi C. Jain, Ugur Lalici, Isao Hayashi, S.B. Lee, Shigeyoshi Sutsui, CRC Press, 1999.
154. King, R., *'Toxic Mold Litigation'*, American Bar Association, 2008.
155. Klaming, L., 'Quality of ODR procedures', in: *'Costs and Quality of Online Dispute Resolution: A Handbook for Measuring the Costs and Quality of ODR'*, Gramatikov (Ed.), Maklu, 2012.
156. Kneißl, F., *'Crowdsourcing for Linguistic Field Research and E-Learning'*, epubli, 2014.
157. Kolb, B., *'Marketing for Cultural Organizations: New Strategies for Attracting Audiences – Third Edition'*, Routledge, 2013.
158. Kozolanka, K., *'Publicity and the Canadian State: Critical Communications Perspectives'*, University of Toronto Press, 2014.
159. Kritis, V., 'Dealing with Trust in eGov Services', In: *Advanced Information Systems Engineering*, pp. 18-19, Springer Berlin Heidelberg, 2006.
160. Lacey, K., *'The Complete Idiot's Guide to Elance'*, Penguin, 2012.
161. Ladd, P., Blanchfield, K., *'Mediation, Conciliation, and Emotions: The Role of Emotional Climate in Understanding Violence and Mental Illness'*, Lexington Books, 2016.
162. Larson, D., 'Artificial Intelligence: Robots, Avatars, and the Demise of the Human Mediator', *Ohio State Journal on Dispute Resolution* 25(1), 2010.
163. Latour, B., Woolgar, S., *'Laboratory Life: the Construction of Scientific Facts'*, Princeton University Press 1986.
164. Laudo, K., and Traver, C., 'E-Commerce', Pearson Education Limited, 2012.
165. Le Bon, G., *'The Crowd'*, Start Publishing 2013.
166. Lee Eden, B., *'Enhancing Teaching and Learning in the 21st-Century Academic Library: Successful Innovations That Make a Difference'*, Rowman & Littlefield, 2015.
167. Lee, U., Lee, H., Jung, B., Song, J., 'Emerging Ubiquitous Knowledge Services: From Mobile Sensing to Ubiquitous Crowdsourcing and Beyond', In: *'Knowledge Service Engineering Handbook'*, CRC Press, 2016.
168. Leithner, A., Maurer-Ertl, W., Glehr, M., Friesenbichler, J., Leithner, K., and Windhager, R., 'Wikipedia and osteosarcoma: a trustworthy patients' information?', *Journal of the American Medical Informatics Association: JAMIA* 17 (4), pp. 373-4, 2010.
169. Lessig, L., *'Code. Version 2.0.'*, Basic Books, 2006.
170. Leventhal, G., 'What should be done with equity theory? New approaches to the study of fairness in social relationships', In: *'Social Exchange: Advances in Theory and Practice'*, Gergen, K.J., Greenberg, M.S., Willis, R.H. (Eds.), 1980.
171. Lévy, P., *'Collective Intelligence: Mankind's emerging world in cyberspace'*, Perseus Books, 1999.
172. Levy, P., and Williams, J., 'The Role of perceived system knowledge in predicting appraisal reactions, job satisfaction, and organizational commitment', *Journal of Organizational Behaviour* 19, 1995.
173. Li, S., and Jain, A., *'Handbook of Face Recognition'*, Springer, 2011.
174. Licht, J., 'How Increased Transparency in Decision-making Affects Perceptions of Legitimacy – the case of priority setting in public health care', Paper prepared for the ECPH General Conference in Reykjavik, 2011.
175. Lind, E., and Tyler, T., *'The Social Psychology of Procedural Justice'*, Springer Science & Business Media, 1988.
176. Lind, E., Lissak, R., and Conlon, D., 'Decision Control and Process Control Effects on Procedural Fairness Judgments', *Journal of Applied Social Psychology*, 1983.
177. Lindzey, G., Gilbert, D., and Fiske, S., *'The Handbook of Social Psychology'*, Oxford University Press, 2003.
178. Liu, S., Volcic, Z., Gallois, C., *'Introducing Intercultural Communication: Global Cultures and Contexts'*, SAGE, 2014.
179. Lodder, A.R., 'Online Dispute Resolution', LSE Specialist seminar, 2016.
180. Lodder, A.R., and Zeleznikow, J., 'Developing an Online Dispute Resolution Environment: Dialogue Tools and Negotiation Systems in a Three Step Model', *Harvard Negotiation Law Review* 10, 2005.

181. Lodder, A.R., and Zeleznikow, J., *'Enhanced Dispute Resolution Through the Use of Information Technology'*, Cambridge University Press, 2010.
182. Lodder, A.R., *'DiaLaw: On legal justification and dialog games'*, Kluwer Academic Publishers, 1999.
183. Lodder, A.R., 'ODR is dead! Long live ODR!' 15th ODR conference: targeting the courts, SOLV Advocaten, 23 May 2016. Available at <http://www.solv.nl/weblog/odr-is-dead-long-live-odr-15th-odr-conference-targeting-the-courts/20825> (last visited Jan. 3, 2017).
184. Logas, H., Kirchner, F., Murray, J., Schäf, M., and E., Whitehead Jr., 'Chekofv: Crowd-sourced Formal Verification', 2nd Workshop on Fun with Formal Methods (FWFM'14), 2014.
185. Lundmark, T., *'Charting the Divide Between Common and Civil Law'*, Oxford University Press, 2012.
186. Luz, N., Poblet, M., and Silva, N., 'Crowdsourcing Dispute Resolution: Survey and Challenges', In: *'Interdisciplinary Perspectives on Contemporary Conflict Resolution'*, Novais, P. (Ed.) and Carneiro, D. (Ed.), IRMA International.
187. Lykourantzou, I., Vergados, D., Kapetanious, E., and Loumos, V., 'Collective Intelligence Systems: Classification and Modeling', *Journal of Emerging Technologies in Web Intelligence* 3(3), 2011, pp .217- 226.
188. Macfarlane, J., 'The National Self-Represented Litigants Project: Identifying and Meeting the Needs of Self-Represented Litigants', Convocation – Treasurer's Advisory Group on Access to Justice (TAG) Working Group Report, 2013.
189. Mackenzie, G., Vincent, A., Zeleznikow, J., 'Negotiating About Charges and Pleas: Balancing Interests and Justice', 24 *Group Decision and Negotiation* 4, 2015.
190. Maher, M., Balachandran, B., Zhang, D., *'Case-Based Reasoning in Design'*, Psychology Press, 2014.
191. Malaga, R., 'The Retaliatory Feedback Problem: Evidence from eBay and a Proposed Solution,' In: *'Emerging Trends and Challenges in Information Technology Management'*, Khosrowpour, M. (Ed.), Information Resources Management Association International Conference, Washington, DC, USA, 2006.
192. Malone, T., Laubacher, R., and Dellarocas, C., 'Harnessing Crowds: Mapping the Genome of Collective Intelligence', Center For Collective Intelligence, Massachusetts Institute of Technology, Working Paper No 2009-001, 2009.
193. Mania, K., 'Online dispute resolution: The future of justice', *International Comparative Jurisprudence* 1(1), Pages 76-86, 2015. Available at <http://www.sciencedirect.com/science/article/pii/S2351667415000074> (last visited Jan. 3, 2017).
194. Maniaci, M., and Rogge, R., 'Conducting Research on the Internet', In: *'Handbook of Research Methods in Social and Personality Psychology'*, Reis, H. (Ed.) and Judd, C., (Ed.), Cambridge University Press, 2014.
195. Mann, B., 'Smoothing Some Wrinkles in Online Dispute Resolution', *International Journal of Law and IT* 17(1), 2009, pp. 83-112.
196. Mansbridge, J., *'Beyond Self-Interest'*, University of Chicago Press, 1990.
197. Marder, N., 'Cyberjuries: A new role as online mock juries', *University of Toledo Law Review* 239 (38), 2006.
198. Marder, N., 'Cyberjuries: The Next New Thing', 14 *Information & Communications Technology Law* 166 , June 2005.
199. Matic, D., 'Blind Arbitration: Proposal for Anonymous Crowdsourced Online Arbitration', Proceedings of the Sintelnet WG5 Workshop on Crowd Intelligence: Foundations, Methods and Practices, Barcelona, 2014.
200. Mauerer, W., *'Professional Linux Kernel Architecture'*, John Wiley & Sons, 2010.
201. Maunganidze, L., Kasayira, J., and Mudhorozzi, 'Educational Assessment and Analysis in the African Cultural Context', In: *'Handbook of African Educational Theories and Practices: A Generative Teacher Education Curriculum'*, HDRC, 2012.
202. Mayer, B., *'The Dynamics of Conflict: A Guide to Engagement and Intervention'*, Josey-Bass, 2012.

203. McAdams, D., *'Game-Changer: Game Theory and the Art of Transforming Strategic Situations'*, Norton & Company, 2014.
204. McEwen, A, and Maiman, R., 'Mediation in Small Claims Court: Achieving Compliance through Consent', *Law and Society Review* 18, 1984.
205. Megret, F., 'What is International Impartiality', In: *'International Rule of Law and Professional Ethics'*, Popvski, V., (Ed.), Ashgate Publishing, 2014.
206. Meier, P., 'TEDx: Using Crowdsourcing to Verify Social Media for Disaster Response', *irevolutions.org*, 21 July 2013. Available at <https://irevolutions.org/2013/07/21/tedx-crowd-sourcing-verification/> (last visited Jan. 3, 2017).
207. Mendoza, M., 'Auctions put on hold after eBay Web site crashed', *Journal and Courier* 12, 1999.
208. Miles, P., 'eBay Justice – Online Dispute Resolution', *Employment Law Blog* by Philip Miles, 2009. Available at <http://www.lawfficespace.com/2009/11/ebay-justice-online-dispute-resolution.html> (last visited Jan. 3, 2017).
209. Mill, J., *'Principles of Political Economy'*, Longmans, Green and Company, 1909.
210. Mill, J., *'Utilitarianism'*, Parker, Son, and Bourn, 1863.
211. Miller, R., and Meininger, M., *'Paralegal Today: The Legal Team at Work'*, 2013.
212. Moffitt, M., and Bordone, R., 'Perspectives on Dispute Resolution: An Introduction', in *'The Handbook of Dispute Resolution'*, Moffitt (Ed.), Bordone (Ed.), John Wiley & Sons, 2012.
213. Moffitt, M., and Bordone, R., *'The Handbook of Dispute Resolution'*, John Wiley & Sons, 2012.
214. Mommers, L., 'Legitimacy and the virtualization of dispute resolution', *Artificial Intelligence and Law* 13, pp. 207-232, 2005.
215. Moore, C., *'The Mediation Process: Practical Strategies for Resolving Conflict'*, John Wiley & Sons, 2014.
216. Morek, R., 'The Regulatory Framework for Online Dispute Resolution: A Critical View', *U. Tol. L. Rev.* 38, pp. 163-175, 2006.
217. Moscovici, S., and Zavalonni, M., 'The group as a polarizer of attitudes', *Journal of Personality and Social Psychology* 12 (2), 1969.
218. Moses, M., *'The Principles and Practice of International Commercial Arbitration'*, Cambridge University Press, 2012.
219. Murray-Rust, D., and Robertson, D., 'Bootstrapping the Next Generation of Social Machines', In: *'Crowdsourcing: Cloud-Based Software Development'*, Li, W. (Ed.), Huhns, M. (Ed.), Tsai, W. (Ed.), Wu, W. (Ed.), 2015.
220. Murray, O., *'The Mediation Handbook'*, Bradford Publishing Company, 2011.
221. Musante, M., Gilbert, M., Thibaut, J., 'The effects of control on perceived fairness of procedures and outcomes', *Journal of Experimental Social Psychology* 19, pp. 223-238, 1983.
222. Musson, A., 'Arbitration and the legal profession in late medieval England', in: *'Law and Legal Process: Substantive Law and Procedure in English Legal History'*, Cambridge University Press, 2013.
223. Nachira, F., Dini, P., and Nicolai, A., 'A Network of Digital Business Ecosystems for Europe: Roots', In: *'Digital Business Ecosystems'*, Nachira, F. (ed.), Nicolai, A. (ed.), Dini, P. (ed.), Le Louarn, M. (ed.), and Leon, L. (ed.), European Commission, a book published by the European Commission, in association and with the support of the FP6 projects DBE and OPAALS, 2007.
224. Nalimov, E., Wirth, C., and Haworth, G., 'KQKQQ and the Kasparov-World Game', *Journal of the International Computer Chess Association* 22(4), pp.195-212, 1999.
225. National Alternative Dispute Resolution Advisory Council (NADRAC), *Dispute Resolution Terms: The Use of Terms in (Alternative) Dispute Resolution*, 2003. Available at <https://www.ag.gov.au/LegalSystem/AlternateDisputeResolution/Documents/NADRAC%20Publications/Dispute%20Resolution%20Terms.PDF> (last visited Jan. 3, 2017).
226. Neskovic, E., Pavicevic, and Dadic, J., 'Crowdsourcing as a Platform for Innovative Business and Marketing Approaches', In: *'Proceedings of the XIII International Symposium SymOrg 2012'*, Jaksic, M. (ed.) and Rakocevic S., (ed.), University of Belgrade, 2012.

227. Neysen, N., 'Exploring the boundaries of intermediaries: An attempt to bridge the gap between value configuration and organizational architecture,' University of Leuven, Working paper 09-28, 2009.
228. Nickel, J., Kalmikoff, J., 'Threadless: Ten Years of T-shirts from the World's Most Inspiring Online Design Community', Harry N. Abrams, 2010.
229. Nozick, R., 'Anarchy, State, and Utopia', Basic Books, Inc, 1974.
230. O'Connell, T., and Cuthbertson, B., 'Group Dynamics in Recreation and Leisure: Creating Conscious Groups through an Experiential Approach', Human Kinetics, 2009.
231. Ohira, M., Masaki, H., and Matsumoto, K., 'An Interactive Visual Interface for Crowd Communication Online', Proceedings of Online Communities and Social Computing: 4th International Conference, OCSC 2011, held as Part of HCI International 2011, Orlando, FL, USA, 2011.
232. Onyema, E., 'International Commercial Arbitration and the Arbitrator's Contract', Routledge, 2010.
233. Page, S., 'The difference: how the power of diversity creates better groups, firms, schools, and societies', Princeton University Press, 2008.
234. Pandya, P., 'Indian Philately Digest', Indian Philatelists' Forum, 2013.
235. Paris, J., 'CliffsNotes Praxis II: Educational Leadership: Administration and Supervision (0410)', Houghton Mifflin Harcourt, 2010.
236. Partridge, M., 'Domain Names and Trademarks', In: 'Overlapping Intellectual Property Rights', Oxford University Press, 2012.
237. Paulsson, J., 'The Freshfields Guide to Arbitration and ADR: Clauses in International Contracts', Kluwer Law International, 1999.
238. Pearson, C., Roux-Dufort, C., and Clair, J., 'International Handbook of Organizational Crisis Management', Sage Publications, 2007.
239. Peters Mayer, D., 'Overcoming School Anxiety: How to Help Your Child Deal With Separation, Tests, Homework, Bullies, Math Phobia, and Other Worries', AMACOM Div American Mgmt Assn, 2008.
240. Philipis, P., 'eDiscovery, meet Crowd', CrowdFlower, 2011. Available at <https://www.crowdfunder.com/ediscovery-meet-crowd> (last visited Jan. 3, 2017).
241. Poblet, M., 'Summary of the ODR movement and review of the relevant literature', In: 'Cost and Quality of Online Dispute Resolution', Gramatikov, M., (Ed.), 2012.
242. Poblet, M., Casanovas, P., López-Cobo, J., Cabrerizo, A., and Prieto, J., 'Mediation, ODR, and the Web 2.0: A Case for Relational Justice', In: 'AI Approaches to the Complexity of Legal Systems', Casanovas, P., (Ed.), Pagallo, U., (Ed.), Sartor, G., (Ed.), Ajani, G., (Ed.), International Workshops AICOL-I/IVR-XXIV, Beijing, China, September 19, 2009 and AICOL-II/JURIX 2009, Rotterdam, The Netherlands, December 16, 2009 Revised Selected Papers, pp. 205-217.
243. Posey, A., and Wrightsman, L., 'Trial Consulting', Oxford University Press, 2005.
244. Pressman, D., 'Patent it Yourself: Your Step-by-step Guide to Filing at the U.S. Patent Office', Nolo, 2012.
245. Prins, C., 'Trust in Electronic Commerce: The Role of Trust from a Legal, an Organizational, and a Technical Point of View', Kluwer Law International, 2002.
246. Quinn, A. J., and Bederson, B. B. 'Human Computation: A Survey and Taxonomy of a Growing Field', In: 'Proceedings of CHI', 2011.
247. Qvist, J., 'A Winner's DNA', Pixiplay LLC, 2011.
248. Rabinovich-Einy, O., 'Enhancing Accountability and Learning in Dispute Resolution Through Technology', 2009 International Workshop on ADR/ODRs, 2009.
249. Ragnedda, M., and Muschert, G., 'The Digital Divide: The Internet and Social Inequality in International Perspective', Routledge, 2013.
250. Ramsey, R., and Telford, T., 'Construction Law Handbook', Thomas Telford, 2007.
251. RAND Europe, 'Study on "eGovernment scenarios for 2020 and the preparation of the 2015 Action Plan"', 2010. Available at http://www.rand.org/content/dam/rand/pubs/technical_reports/2010/RAND_TR888.pdf (last visited Jan. 3, 2017).
252. Rawls, J., 'A Theory of Justice', Harvard University Press, 1971.
253. Reif, L., 'The International Ombudsman Yearbook: 2002', Martinus Nijhoff Publishers, 2004.

254. Renka, R., 'The Good, the Bad, and the Ugly of Public Opinion Polls', article published on http://cstl-cla.semo.edu/rdrenka/renka_papers/polls.htm, 2010 (last visited Jan. 3, 2017).
255. Renning, C., 'Subjective Procedural Justice and Civil Procedure', In: 'Procedural Justice', Röhl, K., (Ed.), Machura, S., (Ed.), Ashgate, 1997.
256. Richardson, E., Sourdin, T., Wallace, N., 'Self-Represented Litigants: Literature Review', a paper published by the Australian Centre for Court and Justice System Innovation (ACCJ-SI), 2012. Available at https://www.monash.edu/__data/assets/pdf_file/0003/142068/self-rep-litigant-lit-review-accjsi-24-may-2012.pdf (last visited Jan. 3, 2017).
257. Robertson, C., 'The Facebook Disruption: How Social Media May Transform Civil Litigation and Facilitate Access to Justice', Case Research Paper Series in Legal Studies Working Paper 2012-5, 2012.
258. Rogers, S., 'How to crowdsource MPs' expenses', *The Guardian*, 18th of June 2009. Available at <http://www.theguardian.com/news/datablog/2009/jun/18/mps-expenses-houseof-commons> (last visited Jan. 3, 2017).
259. Röhl, K., 'Procedural Justice: Introduction and Overview', In: 'Procedural Justice', Röhl, K., and Machura, S., Dartmouth Publishing, 1997.
260. Rowe, M., Thomson, J., and Poblet, M., 'Creating Value through Crowdsourcing: The Antecedent Conditions', In: *Outlooks and Insights on Group Decision and Negotiation: Proceedings of the 15th International Conference, GDN 2015, Warsaw, Poland, June 22-26, 2015*, Springer International Publishing, Cham, Switzerland.
261. Rubins, N., Lauterburg, B., 'Independence, Impartiality and Duty of
262. Rule, C., 'Online Dispute Resolution for Business: B2B, E-Commerce, Consumer, Employment, Insurance, and Other Commercial Conflicts', Jossey Bass, 2002.
263. Rule, C., and Nagarajan, C., 'Crowdsourcing Dispute Resolution over Mobile Devices', In: 'Mobile Technologies for Conflict Management', Poblet M. (editor), pp. 93-107, 2011.
264. Rule, C., and Nagarajan, C., 'Leveraging the Wisdom of the Crowds: the Ebay Community Court and the Future of online Dispute Resolution', 2 *ACResolution* 2, 2010. Available at <http://www.acrnet.org> (last visited Jan. 3, 2017).
265. Rule, C., and Singh, H., 'ODR and Online Reputation Systems: Maintaining Trust and Accuracy through Effective Redress', draft paper (not published), 2011.
266. Rutkin, A., 'Lawyers use online juries to test courtroom tactics', *New Scientist*, 11 March 2015. Available at <https://www.newscientist.com/article/mg22530123.800-lawyers-use-online-juries-to-test-courtroom-tactics/> (last visited Jan. 3, 2017).
267. Sadurski, W., 'Giving Desert Its Due: Social Justice and Legal Theory', Springer Science & Business Media, 1985.
268. Sally, G., 'Pro Linux Embedded Systems', Apress, 2009.
269. Samson, C., and McBride, J., 'Alternative dispute resolution', Presses Université Laval, 1993.
270. Schenk, E., and Guittard, C. 'Towards a characterization of crowdsourcing practices', *Journal of Innovation Economics* 7(1), p. 93, 2011.
271. Schenk, E., and Guittard, C., 'Crowdsourcing: What can be Outsourced to the Crowd, and Why?', In: *Working Papers Series*, HAL – CCSD, 2009.
272. Schermerhorn, Jr., J., 'Exploring Management', John Wiley & Sons, 2009.
273. Schiavetta, S., 'Electronic Alternative Dispute Resolution – Increasing Access to Justice via Procedural Protections', PhD thesis, Faculty of Law, University of Oslo, 2008.
274. Schiavetta, S., 'Relationship Between e-ADR and Article 6 of the European Convention of Human Rights Pursuant to the Case Law of the European Court of Human Rights', *Journal of Information, Law and Technology* (1), 2004.
275. Schkade, D., Sunstein, C., and Kahneman, D., 'Are Juries Less Erratic than Individuals? Deliberation, Polarization, and Punitive Damages', University of Chicago Law School, John M. Olin Law & Economics Working Paper No. 81, 1999.
276. Schminke, M., Ambrose, M., Noel, T., 'The Effect of Ethical Frameworks on Perceptions of Organizational Justice', *Academy of Management Journal* 1997, Vol. 40, No.5, 1190-1207.
277. Schmitz, A., "'Drive-Thru" Arbitration in the Digital Age: Empowering Consumers through Regulated ODR', *Baylaw Law Review* 62, June 16, 2010.

278. Schneider, J., Groza, T., Passant, A., 'A review of argumentation for the Social Semantic Web', *Semantic Web* 4, 2013.
279. Selby, J., 'Debating Sharia: Islam, Gender Politics, and Family Law Arbitration', 2012.
280. Sfetcu, 'Small Business Management for Online Business', 2015.
281. Shaw, W., 'Relativism and Objectivity in Ethics', in: 'Ethical Theory: A Concise Anthology', Giersson, H., (Ed.), Holmgren, M., (Ed.), Broadview Press, 2000.
282. Sheehan, B., 'Basics Marketing: Online Marketing', AVA Publishing, 2010.
283. Sheffrin, S., 'Tax Fairness and Folk Justice', Cambridge, 2013.
284. Sheppard, B., and Lewicki, R., 'Toward general principles of managerial fairness', *Social Justice Research*, pp. 161-176, 1987.
285. Shore, D., 'High Stakes: The Critical Role of Stakeholders in Health Care', Oxford University Press, 2011.
286. Siems, M., 'Comparative Law', Cambridge University Press, 2014.
287. Silkenat, J., Aresty, J., and Klosek, J., 'The ABA Guide to International Business Negotiations: A Comparison of Cross-Cultural Issues and Successful Approaches', American Bar Association, 2009.
288. Silva, C., and Ramos, I., 'Crowdsourcing Innovation: A Strategy to Leverage Enterprise Innovation', *Proceedings of the 7th European Conference on Innovation and Entrepreneurship*, p.624-63, 2012.
289. Šimko, J., and Bieliková, M., 'Semantic Acquisition Games: Harnessing Manpower for Creating Semantics', Springer, 2014.
290. Simmonds, J., 'Seeing Red: An Anger Management and Anti-Bullying Curriculum for Kids', New Society Publishers, 2014.
291. Sloane, P., 'A Guide to Open Innovation and Crowdsourcing: Advice from Leading Experts in the Field', Kogan Page Publishers, 2011.
292. Smith, C., and Cole, G., 'Criminal Justice in America', Cengage Learning, 2007.
293. Solovay, N., and Reed, C., 'The Internet and Dispute Resolution: Untangling the Web', Law Journal Press, 2003.
294. Sommers, S., 'On Racial Diversity and Group Decision Making: Identifying Multiple Effects of Racial Composition on Jury Deliberations', *Journal of Personality and Social Psychology* 90(4), 2006, pp. 597-612.
295. Souza, L., Ramos, I., and Esteves, J., 'Use of a social network for crowdsourcing', Universidade de Aveiro, 2011.
296. Spies, D., 'The Citizen's Guide to Mediation and Arbitration', iUniverse, 2014.
297. Stafford, S., 'Domaining: Tapping The Online Mines', ECKO House Publishing, 2008.
298. Standing, G., 'A Precariat Charter: From Denizens to Citizens', Bloomsbury Publishing, 2014.
299. Stanoevska-Slabeva, S., 'Enabled Innovation: Instruments and Methods of Internet-based Collaborative Innovation', Conference draft prepared for the 1st Berlin Symposium in Internet and Society, October 25-27, 2011. Available at <http://www.hiig.de/wp-content/uploads/2012/04/Crowd-Wisdom-Enabled-Innovation-Paper.pdf> (last visited Jan. 3, 2017).
300. Statsky, W., 'Introduction to Paralegalism: Perspectives, Problems and Skills', Cengage Learning, 2008.
301. Staub, T., and Hodel, T., 'WIKIPEDIA vs. ACADEMIA: An investigation into the role of the Internet in education, with a special focus on collaborative editing tools such as Wikipedia', The 11th International Scientific Conference eLearning and Software for Education Bucharest, 2015.
302. Steiner, D., and Gilliland, S., 'Fairness reactions to personnel selection techniques in France and the United States', *Journal of Applied Psychology* 81(2), 1996.
303. Steiner, E., 'French Law: A comparative approach', Oxford University Press, 2010.
304. Stong, E., 'A User's Guide to Alternative Dispute Resolution in Business cases', In: 'ALI-ABA's Practice Checklist Manual on Advising Business Clients II: Checklists, Forms, and Advice from The Practical Lawyer', Carol, M. (Ed.), ALI-ABA, 2000.
305. Strodtbeck, F., James, R., and Hawkins, C., 'Social Status in Jury Deliberations', *22 Am. Sociological Review* 713 (1957).

306. Sulis, W., 'Fundamental concepts of collective intelligence', *Nonlinear Dynamics, Psychology, and Life Sciences* 1(1), 1997.
307. Sundberg, C., and Huggins, K., 'Customer Service in Insurance: Principles and Practices', Life Office Management Association, 1997.
308. Sunstein, C., 'Republic.com 2.0', Princeton University Press, 2009.
309. Sunstein, C., 'The Law of Group Polarization,' John M. Olin Law & Economics Working Paper No. 91 (2D Series), 1999. Available at http://www.law.uchicago.edu/files/files/91.CRS_Polarization.pdf (last visited Jan. 3, 2017).
310. Susskind, R., 'Tomorrow's Lawyers: An Introduction to Your Future', Oxford University Press, 2013.
311. Szpir, M., 'Clickworkers on Mars', 90(3) *American Scientist*, May-June 2002. Available at <http://www.americanscientist.org/issues/pub/clickworkers-on-mars> (last visited Jan. 3, 2017).
312. Tang, Z., 'Electronic Consumer Contracts in the Conflict of Laws', Bloomsbury Publishing, 2015.
313. Thibaut, J., and Walker, L., 'Procedural Justice', Hillsdale, NJ: Erlbaum, 1975.
314. Thomson, S., Sherr, A., 'Definitions of Online Dispute Resolution', In: 'Cost and Quality of Online Dispute Resolution', Gramatikov, M., (Ed.), 2012.
315. Thouless, R. H., 'General and Social Psychology', University Tutorial Press, 1937.
316. Tideman, N., 'Collective decisions and voting: the potential for public choice', Ashgate Publishing Limited, 2006.
317. Timberg, C., 'The Threatened Net: How the Web became a perilious place', the Washington Post, 2015.
318. Toma, E., 'The Principle of Equality of Arms – Part of the Right to a Fair Trial', 6 *International Journal of Law and Jurisprudence* 2, 2016. Available at <http://www.internationallaw-review.eu/article/the-principle-of-equality-of-arms-part-of-the-right-to-a-fair-trial> (last visited Jan. 3, 2017).
319. Toniolo, A., 'Seminar: Alice Toniolo on Computational Argumentation', Computer Science Blog of St Andrews, 2015. Available at <http://blogs.cs.st-andrews.ac.uk/csblog/2016/11/29/seminar-alice-toniolo-on-computational-argumentation/> (last visited Jan. 3, 2017).
320. Townend, J., 'Guardian launches 'major crowdsourcing experiment' with MPs' expenses application,' *Journalism.co.uk*, 17 June 2009. Available at <http://www.journalism.co.uk/news/guardian-launches-major-crowdsourcing-experiment-with-mps-expenses-application/s2/a534820/> (last visited Jan. 3, 2017).
321. Townsend, J., 'Promoting Peace Before Conflict: Integrating Alternative Methods of Dispute Resolution into the Arbitration Process', In: 'Arbitration Advocacy in Changing Times', Van den Berg (Ed.), Kluwer Law International, 2011.
322. Trakman, L., 'The Impartiality and Independence of Arbitrators Reconsidered', *International Arbitration Law Review* 10, Sweet & Maxwell, 2007.
323. Tsuchiya, A., Wailoo, A., and Edlin, R., 'It Ain't What You Do, It's the Way You Do It: Characteristics of Procedural Justice and Their Importance in Social Decision – Making', *Journal of Economic Behaviour and Organization* 64 (1), February 2007.
324. Tyler, T., 'What is Procedural Justice? Criteria used by Citizens to Assess the Fairness of Legal Procedures', *Law & Society Review* 22 (1), 1988.
325. Tyler, T., and Lind, E., 'A Relational Model of Authority in Groups', *Advances in Experimental Social Psychology* 25, pp. 115-191, 1992.
326. Tyler, T., Rasinski, N., and Spodick, N., 'The influence of voice on satisfaction with leaders: Exploring the meaning of process control', *Journal of Personality and Social Psychology* 48, 1985.
327. Ugwuegbu, D., 'Social Psychology and Social Change in Nigeria: A Systematic Evaluation of Government Social Policies and Programs', iUniverse, 2011.
328. UNCITRAL Conciliation Rules adopted on 4 December 1980. Available at <http://www.uncitral.org/pdf/english/texts/arbitration/conc-rules/conc-rules-e.pdf> (last visited Jan. 3, 2017).
329. Ury, W., 'The Third Side', Penguin Books, 2000.

330. Van den Herik, J., and Dimov, D., 'Can eBay's Community Review Forum fairly resolve disputes?', Paper presented to the 23rd Benelux Conference on Artificial Intelligence (BNAIC 2011), Ghent, Belgium, 2011b.
331. Van den Herik, J., and Dimov, D., 'Towards Crowdsourced Online Dispute Resolution', In: *'Law Across Nations: Governance, Policy & Statutes'*, Sylvia Mercado Kierkegaard (Ed.) and Patrick Kierkegaard (Ed.), International Association of IT lawyers, (IAITL), pp. 244-257, 2011(a).
332. Van den Herik, J., and Van Eijk, R., Social Innovation & Big Data. Presentation for the IT Innovation Day, 19 September 2013, Amersfoort, the Netherlands.
333. Van Kokswijk, J., 'Social Control in Online Society. Advantages of Self Regulation on the Internet', International Conference on Cyberworlds, 2010.
334. Van Veenen, J., 'What dispute resolution tasks to support with ODR, and how to support them', Costs and Quality of Online Dispute Resolution, In: *'Cost and Quality of Online Dispute Resolution'*, Gramatikov, M., (Ed.), 2012.
335. Varmaat, M., Sebok, S., Freund, S., Frydenberg, M., and Campbell, J., *'Enhanced Discovering Computers'*, Cengage Learning, 2016.
336. Vehkoo, J., *'Crowdsourcing in Investigative Journalism'*, Reuters Institute for the study of Journalism, August 2013.
337. Vernon, V., *'Work outside workplace: Why I am working on this paper at home? Evidence from the American Time Use Survey 2003-09'*, Academic paper, State University of New York – Empire State College, 2010.
338. Vishal, B., *'Data Mining in Dynamic Social Networks and Fuzzy Systems'*, IGI Global, 2013.
339. Von Ahn, L., *'Human Computation'*, Phd Thesis, School of Computer Science, Carnegie Mellon University, Pittsburgh, PA, December 2005.
340. Vukovic, M., and Bartolini, C., 'Towards a Research Agenda for Enterprise Crowdsourcing', In: *'Leveraging Applications of Formal Methods, Verification, and Validation'*, Tiziana, M., and Steffen, B., (Eds.), Part of the Proceedings of the 4th International Symposium, Heraklion, Crete, Greece, 2010.
341. Wang, F., *'Internet Jurisdiction and Choice of Law: Legal Practices in the EU, US and China'*, Cambridge University Press, 2010.
342. Welsh, N., 'Perception of Fairness', In: *'The Negotiator's Fieldbook'*, Andrea K. Schneider, Christopher Honeyman, eds., 2006, pp. 165-174.
343. Wemmers, J., *'Victims in the Criminal Justice System'*, Kugler Publications, 1996.
344. White, C., *'Data Communications and Computer Networks: A Business User's Approach'*, Cengage Learning, 2010.
345. Whitla, P., 'Crowdsourcing and Its Application in Marketing activities', 5(1) *Contemporary Management Research* 15, March 2009, p. 26, <http://www.cmr-journal.org/article/view-File/1145/2641> (last visited Jan. 3, 2017).
346. Wolfsfeld, G., *'Making Sense of Media and Politics: Five Principles in Political Communication'*, Taylor & Francis, 2014.
347. Wood, A., and Struthers K., 'Pathology education, Wikipedia and the Net generation', *Medical teacher* 32 (7), p.618, 2010.
348. Wrba, S., *'European Consumer Access to Justice Revisited'*, Cambridge University Press, 2014.
349. Zeleznikow, J., 'Developing Notions of Fairness in Negotiation Support Systems', Paper presented at the World Congress of Philosophy of Law and Social Philosophy, Frankfurt am Main, 2011.
350. Zeleznikow, J., and Bellucci, E., 'Legal Fairness in ADR Processes – Implications for Research and Teaching', *Australasian Dispute Resolution Journal*, 23 (4), pp. 265-273, 2012.
351. Zhao, Y., Zhang, G., Lei, J., and Qiu, W. *'Never Send a Human to Do a Machine's Job: Correcting the Top 5 EdTech Mistakes'*, Corwin Press, 2015.
352. Ziegenfuss, J., and Orourke, P., *'The Ombudsman Handbook: Designing and Managing an Effective Problem-Solving Program'*, McFarland, 2010.
353. Zikmund, W., *'Business Research Methods'*, Cram101 Textbook Reviews, 2016.
354. Zondag, B., and Lodder, A.R., 'Constructing Computer Assisted Dispute Resolution Systems by Developing a Generic Language to Analyse Information Exchange in Conflict Discourse', *International review of law computers & technology*, 21(2), 2007.

RUSSIAN

355. Mironova, S., 'Использование возможностей сети Интернет в разрешении гражданско-правовых споров', Wolters Kluwer, 2010.

SPANISH

356. Ribes, X., 'La Web 2.0. El valor de los metadatos y de la inteligencia colectiva', *Cuadernos de Comunicación e Innovación* 73, Telos, 2007.

Summary

For everyone involved, solving disputes often takes a considerable amount of time and money. A new type of dispute resolution called Crowdsourced Online Dispute Resolution (CODR) seems to have the potential to offer a cheap, fast, and democratic dispute resolution procedure. Since it is not clear whether CODR procedures comply with the requirements of procedural fairness, the attractiveness and the acceptance of the procedures will be low. To eliminate this lack of clarity, we aim to find out whether CODR can fairly resolve disputes. To do so, we will first provide an overview of CODR and formulate our interpretation of procedural fairness. Subsequently, we will investigate whether three of the current CODR procedures are fair. Then, we propose a model of a CODR procedure that complies with our interpretation of procedural fairness. Finally, we conclude that a CODR can be designed to fairly resolve disputes.

In Chapter 1, we provide an introduction to CODR by explaining crowdsourcing and its use in the process of online dispute resolution (ODR). Then, we formulate our problem statement, three research questions, a research goal, and our research methodology. The research methodology is in the form of four research stages. To conclude the chapter, the structure of the thesis is described.

In Chapter 2, we will review the literature on crowdsourcing, ODR and CODR. The review of literature on crowdsourcing enables us to define the term and examine the relation between crowdsourcing and existing concepts, of which we discuss collaborative systems, user-generated content, collective intelligence, and web 2.0. The review of literature on ODR allows us to select a precise definition of the term ODR, discuss five typologies of ODR, and examine the advantages and disadvantages of ODR. Finally, the review of CODR indicates that CODR is a new and unexplored research area.

In Chapter 3, we examine past and present CODR procedures. To facilitate the examination, we group the past and present CODR procedures into three categories, namely CODR procedures functioning as: (1) online opinion polls, (2) online mock jury systems, and (3) arbitration tribunals rendering self-enforceable decisions. The functions of the online opinion polls are extraction and aggregation of information from the general public that may facilitate the resolution of disputes. The function of online mock jury systems is testing real cases before a mock jury. The function of arbitration tribunals is to resolve a dispute through a decision enforced by a private authority.

In Chapter 4, we describe the four building blocks of CODR and analyse the differences between CODR and other dispute resolution mechanisms. The examined building blocks are: (1) the crowd, (2) the incentives, (3) the two categories of disputes, and (4) the CODR procedures.

In Chapter 5, we provide suitable interpretations of two types of fairness, namely objective procedural fairness and subjective procedural fairness. While the former refers to a standard whereby the procedure is assessed by an individual or an organisation, the latter refers to an individual's subjective perception of the fairness of a procedure. To conclude, we establish our interpretation of fairness by adding our interpretation of objective procedural fairness to our interpretation of subjective procedural fairness.

In Chapter 6, we select three CODR procedures on the basis of two criteria, namely, (1) the availability of documents explaining the examined procedures, and (2) the use of adjudication for resolving disputes. The selected CODR procedures are iCourthouse, JuryTest, and the ECRF. Our findings indicate that none of the examined procedures comply with all elements of procedural fairness.

In Chapter 7, we design and construct a model of a CODR procedure that complies with our interpretation of procedural fairness. The model is a non-exhaustive list of ideas for making CODR compliant with our interpretation of procedural fairness.

In Chapter 8, we provide an answer to the problem statement and the conclusions of this thesis and formulate directions for further research.

Samenvatting

Crowdsourced Online Geschillenoplossing

Het oplossen van geschillen kost alle betrokken partijen vaak aanzienlijk veel tijd en geld. Een nieuwe methode om geschillen op te lossen genaamd *Crowdsourced Online Dispute Resolution* (CODR) toont potentie als goedkope, snelle en democratische geschillenoplossingprocedure. Voor de acceptatie van een geschillenoplossingmethode is van belang dat deze voldoet aan de eisen van procedurele billijkheid. Om deze onduidelijkheid te elimineren, streven wij er naar te onderzoeken of geschillen op een eerlijke manier door CODR opgelost kunnen worden. Om dit te doen, zullen we eerst een overzicht geven van CODR en onze interpretatie van procedurele billijkheid formuleren. Vervolgens zullen we onderzoeken of drie van de huidige CODR procedures billijk genoemd kunnen worden. Aansluitend, stellen we een model van een CODR procedure voor die overeenkomt met onze interpretatie van procedurele billijkheid. Ten slotte concluderen we dat een CODR ontworpen kan worden om conflicten op billijke wijze op te lossen.

In hoofdstuk 1 introduceren we CODR door het begrip *crowdsourcing* en diens rol in het proces van online geschillenoplossing uit te leggen. Vervolgens formuleren we onze probleemstelling, drie onderzoeksvragen, een onderzoeksdoel en onze onderzoeksmethodologie. De onderzoeksmethodologie is opgebouwd uit vier onderzoeksfases. Het hoofdstuk besluit met een beschrijving van de structuur van het proefschrift.

Hoofdstuk 2 is een literatuurstudie naar de begrippen *crowdsourcing*, *Online Dispute Resolution* (ODR) en CODR. De literatuurstudie van het begrip *crowdsourcing* stelt ons in staat om het begrip te definiëren alsmede de relatie tussen *crowdsourcing* en bestaande concepten, waarvan *collaborative systems*, *user-generated content*, *collective intelligence* en *web 2.0*. nader onderzocht worden. De literatuurstudie van het begrip ODR stelt ons in staat het begrip te definiëren, de typologie van ODR te bespreken en de voor- en nadelen van ODR te onderzoeken. Vervolgens toont de literatuurstudie van het begrip CODR aan dat CODR een nieuw en onontdekt onderzoeksgebied is.

In hoofdstuk 3 onderzoeken we de huidige en niet meer bestaande CODR procedures. We groeperen de CODR procedures in drie categorieën, namelijk CODR procedures functionerend als: (1) online opiniepeilingen, (2) online schijnjury's en (3) arbitrage tribunalen. De functie van de online opiniepeilingen is om bevolkingsgegevens, die mogelijk conflictresolutie kunnen faciliteren, te extraheren en te bundelen. De functie van online schijnjury's is om echte zaken te testen voor een schijnjury. De functie van arbitrage tribunalen is het oplossen van een dispuut middels een bindende beslissing.

In hoofdstuk 4 beschrijven we de vier bouwstenen van CODR en analyseren we de verschillen tussen CODR en andere geschillenoplossingmechanismen. De onderzochte bouwstenen zijn: (1) het publiek, (2) de stimuli, (3) de twee categorieën disputen en (4) de CODR procedures.

In hoofdstuk 5 verschaffen we geschikte interpretaties van twee typen billijkheid, namelijk objectieve procedurele billijkheid en subjectieve procedurele billijkheid. Terwijl de eerste verwijst naar een standaard waar de procedure wordt beoordeeld door een individu of een organisatie, verwijst de tweede naar de perceptie van een individu van de billijkheid van een procedure. Tot besluit formuleren we onze interpretatie van billijkheid: de samenvoeging van onze interpretatie van objectieve procedurele billijkheid met onze interpretatie van subjectieve procedurele billijkheid.

In hoofdstuk 6 selecteren we drie CODR procedures gebaseerd op twee criteria, namelijk, (1) beschikbaarheid van documentatie waarin de onderzochte procedures worden toegelicht en (2) het gebruik van berechting om disputen op te lossen. De geselecteerde CODR procedures zijn iCourthouse, JuryTest en het ECRF. Onze bevindingen geven aan dat geen van de onderzochte procedures voldoen aan alle elementen van procedurele billijkheid.

In hoofdstuk 7 ontwerpen en bouwen we een model van een CODR procedure die voldoet aan onze interpretatie van procedurele billijkheid. Het model bevat een niet-uitputtende lijst van ideeën om CODR overeenkomstig te maken aan onze interpretatie van procedurele billijkheid.

In hoofdstuk 8 geven wij een antwoord op de probleemstelling, presenteren wij de conclusies van dit proefschrift en formuleren we ideeën voor verder onderzoek.

Summary in Bulgarian

Разрешаването на спорове често отнема значително време и пари. Един нов начин за разрешаване на спорове, наречен онлайн разрешаване на спорове чрез краудсорсинг (ОРСК), изглежда има потенциал да разрешава спорове евтино, бързо и демократично. Тъй като не е ясно дали ОРСК процесите съответстват на изискванията на процесуалната справедливост, тези процеси може да са непривлекателни и неприемливи за спорещите. За да се премахне тази неяснота, ние целим да установим дали ОРСК процесите разрешават спорове по справедлив начин. За да постигнем тази цел, ние първо предоставяме преглед на ОРСК процеси и формулираме нашата интерпретация на процесуална справедливост. След това изследваме дали 3 от съществуващите ОРСК процеси са справедливи. Впоследствие, ние предлагаме модел на ОРСК процес, който е съобразен с нашата интерпретация на процесуална справедливост. Накрая заключаваме, че ОРСК процеси могат да бъдат създадени по такъв начин, че да разрешават спорове по процесуално справедлив начин.

В Глава 1 ние предоставяме въведение към ОРСК чрез обясняване на практиката, наречена краудсорсинг и нейната употреба в процесите на разрешаване на спорове. След това ние формулираме нашия научен проблем, три изследователски въпроса, изследователска цел и изследователска методология. Изследователската методология е във формата на четири етапа. В заключението на главата ние описваме структурата на тази докторска дисертация.

В Глава 2 е разгледана литературата относно краудсорсинг, онлайн разрешаване на спорове (ОРС) и ОРСК. Разглеждането на тази литература ще ни позволи да дефинираме понятието ОРСК и да изследваме връзката между краудсорсинг и сходни понятия, от които дискутираме системи за съвместна работа, генерирано от потребителите съдържание, колективен интелект и Уеб 2.0. Разглеждането на литературата относно ОРС ни позволява да изберем конкретна дефиниция на понятието ОРС, дискутираме пет типа ОРС и изследваме предимствата и недостатъците на ОРС. Накрая ние обобщаваме, че ОРСК е ново и неизследвано академично поле.

В Глава 3 разглеждаме минали и настоящи ОРСК процедури. За да улесним изследването, ние групираме миналите и настоящите ОРСК процедури в 3 категории и по-конкретно ОРСК процедури, функциониращи като: (1) онлайн проучвания на общественото мнение, (2) онлайн системи, имитиращи жури, (3) арбитрирани трибунали, произнасящи самоизпълними решения. Функцията на онлайн проучванията на общественото мнение е да се улесни разрешаването на спорове чрез извличане и обоб-

щаване на информация от широката общественост. Функцията на онлайн системите, имитиращи жури, е тестване на истински дела чрез разрешаването им от имитация на жури. Функцията на арбитражните трибунали е да разрешават спорове чрез решения, изпълняеми от частни лица.

В Глава 4 ние описваме четирите градивни елемента на ОРСК и анализираме разликите между ОРСК и други системи за разрешаване на спорове. Изследваните градивни елементи са: (1) тълпа, (2) стимули, (3) две категории от спорове и (4) ОРСК процедури.

В Глава 5 ние предоставяме подходяща интерпретация на два типа справедливост, именно обективна процесуална справедливост и субективна процесуална справедливост. Първият вид справедливост се отнася до стандарт, използван от индивиди или организации за преценяването на справедливостта на процесите. Вторият вид справедливост се отнася до субективните възприятия на индивиди относно справедливостта на процеси. В заключение излагаме нашата интерпретация на справедливост чрез добавянето на нашата интерпретация на обективна процесуална справедливост към нашата интерпретация на субективна процесуална справедливост.

В Глава 6 ние избираме 6 ОРСК процеси въз основа на 2 критерия, именно, наличие на документи, обясняващи изследваните процедури и употребата на присъждане за разрешаването на спорове. Избраните ОРСК процедури са iCourthouse, JuryTest, и ECRF. Нашите изводи са, че нито един от изследваните процеси не е съобразен с всички елементи на процесуална справедливост.

В Глава 7 е създаден модел на ОРСК процедурите, който е съобразен с нашата интерпретация на процесуална справедливост. Моделът е неизчерпаем лист от идеи за създаването на ОРСК процеси, съобразени с нашата интерпретация на процесуална справедливост.

В Глава 8 ние предоставяме отговор на научния проблем и заключенията на дисертацията, също формулираме насоки за по-нататъшни изследвания.

Publications

1. Van den Herik, J., Dimov, D., 'Towards Crowdsourced Online Dispute Resolution', *Law Across Nations: Governance, Policy & Statutes*, Kierkegaard, S. (Ed.), Kierkegaard, P. (Assoc. Ed.), International Association of IT Lawyers (IAITL), 19 September 2011, pp. 244-257. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1933392 (last visited Jan. 3, 2017).
2. Van den Herik, J., Dimov, D., 'Can eBay's Community Review Forum fairly resolve disputes?', *BNAIC proceedings, the 23rd Benelux Conference on Artificial Intelligence (BNAIC 2011)*, 3 November 2011.
3. Van den Herik, J., Dimov, D., 'Een Crowdsourcing Model voor eBay', in 'Samen Slimmer: Hoe de 'wisdom of crowds' onze samenleving zal veranderen', Kreijveld, M. (Ed.), Stichting Toekomstbeeld der Techniek, April 2012.
4. Van den Herik, J., Dimov, D., 'Geschilbeslechting door crowdsourcing', *Tijdschrift conflicthantering*, 11 October 2012.
5. Van den Herik, J., Levy, D., Plaat, A., Dimov, D., 'Plagiarism in Game Programming Competitions', *Entertainment Computing*, Volume 5, Issue 3, August 2014. Available at <http://www.sciencedirect.com/science/article/pii/S1875952114000093> (last visited Jan. 3, 2017).

Curriculum Vitae

Daniel Dimov was born in Bulgaria in 1983. He completed his secondary education with a focus on biology and chemistry in Ruse (Bulgaria). In 2008, Daniel obtained a Master's degree in Law from the University of Ruse. In 2009, he was granted a professional qualification as a lawyer by the State Examination Commission of the Bulgarian Ministry of Justice.

Fascinated by research opportunities in the field of law, Daniel pursued his further studies in Radboud University Nijmegen (The Netherlands), where he obtained his second Master's degree in European Law in 2009. In addition, Daniel obtained a certificate in Public International Law from The Hague Academy of International Law (The Netherlands).

In September 2010, Daniel started his PhD research at eLaw at Leiden University. During the research period, together with his PhD supervisor Jaap van den Herik, he published articles in the area of alternative dispute resolution in three peer-reviewed publication outlets and presented his articles at conferences in Cyprus, Belgium, and the Netherlands. Daniel did traineeships with the European Commission (Brussels), European Digital Rights (Brussels), and the Institute for EU and International Law "T.M.C. Asser Institute" (The Hague).

In 2013, Daniel began his independent advisory practice and established a legal consultancy firm Dimov Internet Law Consulting based in Belgium. The firm specialises in the field of data protection, domain names, crowd-sourcing (including crowdfunding), Internet governance, and e-commerce.

Daniel is a fellow of the Internet Corporation for Assigned Names and Numbers (ICANN), a member of Internet Bar Association, Internet Society, Nederlandse Juristen Vereniging, and other professional associations.

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