

Towards Crowdsourced Online Dispute Resolution

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ABSTRACT

Using crowdsourcing for solving disputes is a subject that has not been discussed in many scientific publications. However, since Crowdsourced Online Dispute Resolution (CODR) provides a cheap, fast, and democratic dispute resolution, it has a potential that needs to be explored scientifically. How should eBay solve otherwise 60 millions disputes per year? Building a CODR platform with the convenience and attractiveness of other collective intelligence systems, such as Wikipedia, YouTube, and Google, may cause many variants of traditional forms of dispute resolution fading away. In order to shed more light on CODR, the present contribution defines this new type of dispute resolution, describes the present state of play, and builds a theoretical framework by investigating CODR building blocks. Although the paper provides only the start of a profound discussion, it shows introductory explorations of the key theoretical issues involved in CODR.

Keywords: Crowdsourced Online Dispute Resolution (CODR). Collective Intelligence and Law. Definition of CODR. State of Play of CODR. The Building Blocks of CODR.

1. Introduction

Ever since the creation of Google, there has been a steady increase in the number of websites using “the wisdom of the crowd”. Wikipedia and the Amazon’s Mechanical Turk are just two telling examples. At present, outsourcing certain tasks to large groups of people is easy, even for a layman. Yet, any attempt to *define* this phenomenon has become one of the most challenging ventures of the last five years. For the purpose of this contribution, we will call this phenomenon crowdsourcing and define it as it is defined by Surowiecki (2006).

“Crowdsourcing is (1) the act of taking a job traditionally performed by a designated agent (usually an employee) and (2) outsourcing it to an undefined, generally large group of people in the form of an open call” (Surowiecki, 2006).

While crowdsourcing is often used in many different areas, its use in the area of law is not very popular. At present, there are only a couple of websites providing Online Dispute Resolution (ODR) that uses crowdsourcing as a part of the dispute resolution process. We call this new form of dispute resolution: *Crowdsourced Online Dispute Resolution* (CODR). Since, up to this moment, CODR has not been discussed scientifically, the present paper aims to clarify this issue by giving a definition of CODR (Section 2), discussing the current state of play of CODR (Section 3) and the building blocks of CODR (Section 4). Finally, we provide a conclusion (Section 5).

2. Defining CODR

For our definition of the term CODR, we use the definition of ODR as provided by Kaufmann-Kohler and Schultz (2004).

“ODR is a broad term that encompasses forms of Alternative Dispute Resolution (ADR) and court proceedings which use internet as a part of the dispute resolution process” (Kaufmann-Kohler and Schultz, 2004, p.7).

On the basis of this definition, we provide the following definition of CODR.

CODR is a term that encompasses some forms of ADR and court proceedings using internet and crowdsourcing as parts of the dispute resolution process.

To clarify CODR more precisely, we need also to delineate the crowd that participates in CODR. We define it as follows.

The crowd is a (generally large) group of people who participates in the dispute resolution process through an open call.

Here, some clarifications need to be made on the term “open call”. In our view, two requirements must be met to classify a call as “open”. The first requirement is that everyone from the online community where the call is published should be entitled to

participate in CODR if she meets certain conditions.¹ For instance, a condition can be that only users of a website who have been registered for a certain time can participate in CODR, as it is the case at the eBay's Community Review Forum (<http://www.ebaycourt.com>). A second condition can be that only the first n members of the crowd (e.g., n = 30) can participate in CODR.²

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.

3. State of Play of CODR

At present, there are only a few CODR procedures.³ On the basis of their functions, we classify them into three types: (1) online opinion polls, (2) online mock trials, (3) CODR procedures rendering decisions that are enforced by private authorities. It should be noted that, since online mock trials do not constitute a real dispute resolution, their classification as a form of CODR is questionable. However, since the process used by online mock trials has some features in common with the dispute resolution process we will fictively accept that they are a *sui generis* form of CODR. Two common features between the mock trials and dispute resolution process are: (1) a case submission which consists of facts from the perspectives of each party and (2) the publication of a verdict by a jury. The classification of the mock trials as a form of CODR is also supported by the fact that mock trials are sometimes used as an ADR tool, in which parties that are not inclined to negotiate may see how the merits of their respective cases stand

¹ The members of the crowd can participate in CODR as jurors, arbitrators, mediators, and facilitators of negotiations

For brevity, we use 'she' or 'her' where 'she or he' and 'his or her' are meant.

² It should be noted that CODR can also exist without requiring the crowd to meet any conditions to participate in the procedure.

³ See, for example, iCourthouse (www.icourthouse.com), SideTaker (www.sidetaker.com), AllRise (www.allrise.com), eBay's Community Review Forum (ECRF), (<http://www.ebaycourt.com>).

when argued in front of neutral evaluators. Below, we will discuss the three types of CODR procedures in subsections 3.1 to 3.3.

3.1 Online Opinion Polls

Typical examples of online opinion polls are iCourthouse (www.icourthouse.com), SideTaker (www.sidetaker.com), AllRise (www.allrise.com), People'sCourtRaw (www.peoplescourtraw.com), Truveli (www.truveli.org). Such CODR procedures (1) give a party who feels subject to injustice an opportunity to express her feelings and ask for the support from the society, (2) allow the parties to post their disputes anonymously, (3) provide a commonsense judgment, (4) do not require legalistic language, (5) and offer convenient and non-cost procedures (Marder, 2006, pp. 242 – 244). However, the procedures are often full with trivial and silly claims, and allow a single person to register multiple times which makes such polls not representative. Also, the jurors are often introduced to the case by viewing the responses of the other jurors which lead to informational and reputational cybercascades (Marder, 2006, pp. 245 – 247). In an informational cybercascade, there is a point where people cease relying on their personal opinions. Instead, they decide on the basis of the signals conveyed by others. Consequently, the behavior of the first few people produces similar behavior from a large number of followers. In a reputational cybercascade, people neglect their personal opinions and go along with the crowd in order to maintain the good opinion of others (Sunstein, 2009, pp. 83-86).

3.2 Online Mock Trials

Typical examples of websites offering online mock trials are eJury (www.ejury.com) and VirtualJury (www.virtualjury.com). CODR procedures functioning as online mock trials are used by lawyers who have to handle actual cases. Since the jurors in the online mock trials undergo a screening process ensuring unbiased and impartial opinions, the outcomes of such procedures are much more representative than the outcomes of the online opinion polls. That is why they are used to provide important feedback to the lawyers and serve as diagnostic tools (Marder, 2006, pp. 249 – 251). Also, it should be noted that such procedures are quick and inexpensive.

3.3 CODR rendering decisions enforced by private authorities

The code of cyberspace (the set of protocols, the set of rules, implemented or codified in the software of cyberspace that determine how people interact, or exist, in this space) provides a perfect regulation because it does not allow deviation from the structures established by this architecture (Lessig, 1998). The code is as important as the law in defining and defeating the liberties of the Internet. Therefore, decisions enforced through the code will have a binding force alternative to the enforcement power of the state. In this regard, the first well known dispute resolution procedure of which the decisions are enforced through the code 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. Later on, taking into account the example of UDRP, eBay launched the eBay's Community Review Forum (ECRF), a website offering a CODR procedure of which the decisions are enforced by a private authority (eBay). The ECRF can be regarded as a groundbreaking step in the development of CODR. The futuristic idea that a dispute can be effectively solved at no cost by a large group of people located in many different countries in 30 minutes after submitting the claim has become reality. At present, ECRF allows eBay members to appeal only against negative feedback they have received on eBay. The final decision of the jury is enforced by an eBay Customer Service Representative, who, if appropriate, removes the feedback.

4. Building blocks of CODR

CODR is a collective intelligence system. On the basis of a study by Malone and Dellarocas (Malone and Dellarocas, 2009), four building blocks are distinguished in almost every collective intelligence system. We adopt the idea that CODR is also built on four building blocks: (1) staffing, (2) incentives, (3) goal, (4) structure/process. In the context of CODR, these building blocks

can be defined as: (1) the crowd, (2) incentives motivating the crowd to participate in CODR, (3) types of disputes which can be solved through CODR, and (4) the CODR procedure. We will discuss these four building blocks in the next subsections.

4.1 The crowd

As mentioned above, the crowd is a generally large group of people participating in the dispute resolution process through an open call. However, in order to clarify the term crowd, two questions need to be answered: (1) should the crowd be viewed as a single entity or as a sum of independent individuals and (2) in order to settle disputes adequately, should the crowd be diverse (in nationality, geographical location, education, age, etc.)?

As to the first question, we have to find a criterion for differentiating between a collective decision and an aggregation of decisions. In this regard, a definition of a “collective decision” provided by Tideman can be helpful. He states the following.

“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).

Since a collective decision entails coordination of intentions, it is present if there is communication amongst the members of the crowd with regard to the dispute. Obviously, communications amongst the members of the crowd allow coordination of intentions. So, if the members of the crowd are able to communicate with each other, the crowd should be regarded as a single entity and *vice versa*.

With regard to the second question, there are some empirical studies indicating the advantages of decisions taken by diverse groups. We recall three such empirical studies.

First, an empirical study conducted by Sommers (2006, pp. 497-612) establishes that a group’s racial composition affects its decision making through multiple processes. Through the simulation of a real trial, including a jury-eligible sample, voir dire, video trial presentation, jury instructions, and deliberations, Sommers identifies specific advantages of racial heterogeneity for

group decision making and demonstrates the influence of race-relevant jury selection questions on subsequent trial judgments.

Second, an empirical study conducted by Page (2008) led to the creation of a theoretical framework to explain why groups often outperform experts. On the basis of several experiments, Page formulated the Diversity Trumps Ability Theorem. He stated that given four conditions, “a randomly selected collection of problem solvers outperforms a collection of the best individual problem solvers” (2008, p. 162). The four conditions are: (1) the problem has to be hard, (2) the people have to be smart, (3) the people have to be diverse, (4) the group size has to be bigger than a handful and chosen from a larger population. Page’s theorem is based on the observation that people of high ability are a homogenous group. Most of them have been trained in the same institutions, and they tend to possess similar perspectives and apply similar problem solving techniques. According to Page, the theorem is not a mere metaphor or cute empirical anecdote that may or not be true ten years from now. He stated that it is a logical truth (Page, 2008, p. 162).

Third, in 2007, the logic of the Diversity Trumps Ability Theorem was anticipated and demonstrated by Lakhani and Jeppesen (2007). They investigated how the scientific problems at Innocentive (<http://www.innocentive.com>), an "open innovation" company that takes research and development problems in a broad range of scientific domains, were solved. They looked at 166 scientific problems that had stymied the R&D labs at 26 separate firms. The results were contrary to decades of conventional wisdom in science, because the people that were least expected to solve a problem were exactly the ones who most likely were able to solve it

4.2 Incentives

Below, we distinguish five types of incentives that can motivate the crowd to participate in CODR.

The first incentive is the sense of service to the community. For instance, Rule and Nagarajan (2010) established that, in spite of the eBay’s initial concerns that there would not be many applicants to be jurors in the ECRF, they received more than sufficient applications to support their case volume. eBay planned certain initiatives to be provided to jurors as an award for their work, but no

incentive payouts were needed because the jurors were willing to participate out of their sense of service to the community.

The second incentive is the financial remuneration. According to a study by Ipeirotis (2008), thirty-four percent of the crowdsourced workers in the Amazon Mechanical Turk listed in the survey that they participate for “Pocket Change / Extra Cash” as a motivation and forty-nine percent listed “Income Purposes”. So, it can be seen that a large part of the turkers are motivated by the financial profit. In this regard, it should be noted that the wages of the crowdsourced workers are typically quite low (Felstiner, 2010, p. 24). At present, there are no CODR providers that offer remuneration for participating in a crowd. However, offering remuneration to the members of the crowd is theoretically possible. Legally, this can be done by providing that the members of the crowd have the status of independent contractors.

The third incentive is the credit which the author will receive as a result of her contribution to the community. If the decisions of the cases are published in the online communities together with the name of the people that have decided the cases, the incentive will be similar to the incentive of the contributors in Wikipedia and the incentive system observed in the scientific community. Publishing of CODR decisions will simultaneously promote the consistency between the decisions. However, it should be noted that the traditional notion of the arbitration proceedings is that the arbitral awards and proceedings are confidential. The same notion is valid for mediation. It should be noted, however, that while the notion of confidentiality is valid for the legally binding arbitration, there are no obstacles to publish the decisions rendered by procedures using non-binding arbitration. Publishing such decisions will guarantee the information equality of the parties, allows scrutiny as quality assurance and will allow the law develop rationally and consistently (Hörnle, 2009, pp. 144-149). A typical example of a non-binding arbitration procedure of which the decisions are published is UDRP. It should be noted that the UDRP decisions are not only published but also classified in an informal overview issued in 2005.⁴ The important role of this overview for promoting consistency among

⁴ WIPO Overview of WIPO Panel Views on Selected UDRP Questions (23 March 2005), available at <http://www.wipo.int/amc/en/domains/search/overview/index.html> .

UDRP decisions can be seen from several cases rendered by UDRP panelists.⁵

The fourth incentive for participating in CODR is the interest in the knowledge on the dispute resolution process which the members of the crowd will gain if they participate in CODR. Later, the members of the crowd may wish to complain or respond to a claim in the same CODR platform.

The fifth incentive for participating in CODR could be the entertainment which CODR can provide. For instance, according to the abovementioned study by Ipeirotis (2008), twenty-one percent of the crowdsourced workers in the Mechanical Turk listed as their choice “to kill time” and forty-two percent listed “Entertainment”.

4.3 Types of disputes which can be solved through CODR

We distinguish two main types of disputes which can be solved through CODR. First, CODR procedures can be designed to solve *offline* disputes, such as civil disputes, family disputes, and personal relationship disputes. Typical examples of CODR resolving offline disputes are CODR procedures functioning as online opinion polls. Second, CODR can be designed to solve *online* disputes. In particular, it is rather suitable for solving (1) e-commerce disputes, (2) disputes in global online job marketplaces, (3) social networks, and (4) virtual worlds. Below we discuss all four of them.

(1) CODR is suitable for solving e-commerce disputes arising from transactions in online auctions, such as eBay or Amazon because, when such an auction needs to solve 60 million disputes per year, as it is the case of eBay, dispute resolution providers that work by providing dispute resolution through an appointed third

⁵ *Fresh Intellectual properties, Inc v 800Network.com, Inc*, WIPO Case D2005-0061 (21 March 2005); *Wellquest International, Inc v Nicholas Clark*, WIPO Case No D2005-0552 (19 July 2005); *Alain-Martin Pierret v Sierra Technology Group, LLC, eeParts, Inc v E E All Parts Corp* NAF Case No FA481753 (14 July 2005); *Stevland Morris v Unofficial Fan Club*, NAF Case No FA453986 (22 June 2005);

neutral party cannot handle the amount of the disputes (Rule and Nagarajan, 2010, p.5).

(2) CODR can be used in the global job marketplaces using crowdsourcing, such as Amazon's Mechanical Turk platform (www.mturk.com), oDesk (www.odesk.com), Elance (www.elance.com), Freelancer (<http://www.freelancer.com>), that allow businesses to hire remote workers. In these websites, disputes may arise on whether or not the contractor was working on the appropriate contract, whether the quality of her work is on the required level, and whether she was paid for it.

(3) Other places well suited for using CODR are the social sites as Facebook and MySpace (Schmitz, 2010, p.230). In these places, disputes concerning insults can be resolved by CODR.

(4) Because CODR does not require a presence of professional judges, arbitrators or mediators, it can be used in the virtual worlds, such as *Second Life* (www.secondlife.com), *There* (www.there.com), and *Active Worlds* (www.activeworlds.com), which are populated by millions of "residents". Since, in such worlds, there could be a huge amount of disputes concerning relationship matters, intellectual property rights, and even virtual property, CODR seems to be an appropriate type of dispute resolution process because only the members of the virtual worlds are often familiar with some virtual interactions and transactions (Fairfield, 2008, pp. 429-433; Schmitz, 2010, pp. 230-232).

4.4 The CODR procedure

To clarify the CODR procedure, we will first answer the question who is the designer of a CODR procedure (4.4.1). Then, on the basis of six criteria we distinguish 14 types of CODR procedures (4.4.2). Subsequently, we will examine the four stages that are typical for every CODR procedure, namely, filling the complaint, notifying the respondent, reaching a decision, enforcement of the decision (4.4.3).

4.4.1 The designer of the CODR procedure

While ODR procedures are typically designed by an ODR provider, CODR procedures can be designed from the members of

the online communities where CODR is used. This will underline their function as a form of direct democracy in the online communities. As Rainey (2009) points out, the more input and diversity in the development process, the less any one person or small group's perspective will dominate the application's functionality.

4.4.2 Types of CODR procedures

Below, we use six criteria to distinguish 14 types of CODR procedures. These 14 procedures are numbered from 1 to 14.

Criterion 1: Mechanism used for solving disputes

With regard to the mechanism used for solving disputes, four types of CODR can be distinguished, namely, CODR solving disputes through litigation, arbitration, mediation, and negotiation.

(1) CODR solving disputes through litigation

At present, there are no pure forms of CODR that solve disputes through litigation, but there are proposals for replacing the traditional juries in the civil procedures by cyber juries, which would be a form of CODR (Marder, 2005). However, it should be noted that the existence of cyber juries does not lead automatically to qualifying the procedure as a CODR. Yet, if they are chosen by the local community or an even broader community through an open call, it is an indicator for the existence of a CODR procedure.

(2) CODR solving disputes through arbitration

Up to this moment, CODR is used to solve disputes only through a non-binding form of arbitration. ECRF offers such a non-binding form of arbitration. This form of CODR never produces a legally binding award.

(3) CODR solving disputes through mediation

At present, there is no CODR that uses mediation as a mechanism for solving disputes, but such forms can be created in the future. For instance, the crowd in a CODR procedure solving disputes through mediation can be a group of people having knowledge and experience allowing them to perform functions of mediators. Here, we refer to our explanation of closed CODR mentioned below.

(4) CODR solving disputes through negotiation

The reason a person negotiates with someone else is to produce better results than would occur otherwise. Consequently, knowing The Best Alternative To a Negotiated Agreement (BATNA) is an important step for the success of negotiation (Lodder and Zeleznikow, 2010, pp.41-43). In this regard, a CODR procedure can be designed in such a way that it will allow the crowd to give its opinion on the BATNA. The crowd's opinion may remove any unrealistic optimistic expectations with regard to other mechanisms of dispute resolution, such as arbitration and litigation. As a result, the negotiation proceedings offered by such a CODR procedure can be more successful than the negotiation proceedings offered by an ODR procedure.

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

On the basis of the conditions which participants in CODR should satisfy to participate in CODR, we distinguish: (5) open CODR and (6) closed CODR.

(5) Open CODR

In the open CODR, everyone can participate in the process of solving disputes. The three websites SideTaker, AllRise, and iCourthouse can be regarded as providing open CODR procedures because they allow everyone to become a juror. In fact, all of the present open CODR procedures are simply online opinion polls which are not attached to certain online communities, but function as autonomous dispute resolution platforms. It should be noted,

however, that, in the future, open CODR can lead to transforming unregulated communities into self-regulated communities.

(6) Closed CODR

In a closed CODR, disputes are solved only from a group of people that satisfies certain requirements. The reason for adding certain requirements to the participation in a CODR procedure is to gather a crowd that has sufficient knowledge for solving certain disputes. From Plato's days to the present, knowledge has been a personal accomplishment, but, nowadays, there is a gradual change leading to the idea that knowledge is also a commodity, which can be bought, sold, managed, invested in, leveraged, and deployed (cf. O'Hara, 2002, p.64).

What a closed CODR procedure tries to achieve is, by adding specific requirements for participating as a crowd in the dispute resolution process, to solve disputes by more effectively managing, leveraging, buying, selling, and deploying the knowledge of the internet society, which allows solving disputes only by competent members of the crowd. This idea completely crashes the old idea that CODR is a procedure in which disputes are solved only by laypersons.

In contrast, a closed CODR procedure allows solving disputes by highly educated persons. Indeed, the parties may use a traditional dispute resolution process, including ODR, and chose a third neutral party having specific knowledge that is required for solving the particular dispute. However, at least in our opinion, a closed CODR will better manage and leverage knowledge than the traditional dispute resolution procedures. This is because a closed CODR procedure may automatically examine a huge amount of data concerning different persons in order to find the right members of the crowd. Moreover, it can provide a decision that is made from a diverse group of people that is specially gathered for the particular dispute.

A typical example of a closed CODR procedure is the ECRF that requires only people having certain experience in eBay to participate as a crowd in the dispute resolution process. Yet, it should be noted that a closed CODR procedure can be used not only in open communities, such as eBay, but also in private communities, such as Covisint, founded in 2000, which

amalgamated together the systems of GM, Daimler Chrysler, and Ford. Each of these companies brought together their individual e-business initiatives which led to the formation of a single global business-to-business supplier community. By January 2003, this community had over 77 000 members spread over more than 2600 companies (Plant, 2004, p. 59).

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

With regard to the number of crowd members, a CODR procedure can be (7) a CODR procedure in which the number of crowd members is fixed and (8) a CODR procedure in which the number of crowd members is not fixed.

(7) CODR procedure with a fixed number of crowd members

This kind of CODR can provide a fast resolution of disputes because the result can be reached within minutes or hours. For instance, in the ECRF, the group that directly takes the decision is composed of 7 jurors. If the first 4 people vote in favor of one of the parties, the case will be closed and a decision rendered.

(8) CODR procedure with a not fixed number of crowd members

This kind of CODR allows every member of the crowd that is entitled to participate in the dispute resolution process to participate within a certain period of time. After the time has elapsed, a decision is rendered. However, in the case that a CODR procedure uses voting, a problem can arise if an equal amount of members vote for both parties. In this case, the dispute has not been resolved. An eventual solution to this problem is to create a second tour, but it will slow down the process of dispute resolution.

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

(9) Mixed CODR

The third neutral party in a CODR procedure could be composed of a combination between appointed professional arbitrators, judges, or mediators and jurors from the crowd. For instance, the third neutral party in the process can be composed of 3 appointed arbitrators and 30 cyber jurors chosen by an open call. The appointed judges, arbitrators, or mediators can instruct the juries on the law before they begin their deliberations, answer questions that the jury might have during its deliberations, and suggest to the online jurors that they should take the vote on the basis of “evidence-driven deliberations” (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 formation of coalitions. A mixed CODR would exist, for example, if the traditional juries are replaced by cyber juries who are chosen by a local community through an open call.

(10) Pure CODR

A pure CODR procedure is a procedure in which the third neutral party is composed from a crowd only.

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

(11) CODR allowing deliberations between the members of the crowd

According to Surowiecki (2005, p. xix) groups benefit from members talking to and learning from each other, but too much communication, he states, can make the group as a whole less intelligent. The reason for this is group polarization, which means that, after deliberation, people are likely to move toward a more extreme point in the direction to which the group’s members were originally inclined (Sunstein, 2009, p.60). An effect of the group polarization is the decrease of the diversity of opinions in the group which leads to a decision that, as mentioned above, has some disadvantages compared to a decision taken by a group having diverse opinions (Sunstein, 2009, p.62). It should also be noted that, according to an experiment, polarization is highly likely to occur in

an extreme level when group membership is made salient and people have a high degree of anonymity (Sunstein, 2009, p. 70).

(12) CODR not allowing deliberations

At present, all of the existing CODR procedures do not allow the members of the crowd to deliberate.

Criterion 6: The number of members of the crowd

(13) CODR in which the crowd is a small group of people

A CODR procedure in which the crowd is a small group of people allows easily communication between its members. Deliberations can straightforwardly be conducted in a group of 5 to 7 people. However, small groups cannot offer a large variety of opinions.

(14) CODR in which the crowd is a large group of people

The main advantage of large groups is the diversity of opinions (or solutions) that their members offer. However, these groups are often difficult to manage (Surowiecki, 2005, p. xix). Also, the members of the crowd in a large group may have difficulties communicating with each other in “real” time. Indeed, from the chess game *Kasparov versus the World*, it can be seen that a discussion concerning a certain future decision is possible even amongst 50,000 people. In this game, which was played in 1999 over the Internet, Garry Kasparov, playing the white pieces, met the World Team which took its decisions, after a consultation in an online forum, on the basis of a plurality vote (Nalimov, Wirth, Haworth, 1999; Fadul, 2008, p. 99). A similar “consultation” can be conducted in a closed CODR procedure. However, such a “consultation” cannot be regarded as a form of deliberations, because the latter are conducted in a private environment and in “real” time. While a CODR procedure can restrict the access to such

a forum to people that are not mediators/adjudicators, conducting “real” time deliberations between the members of a large group of people seems difficult.

4.4.3 Stages of CODR procedure

A CODR procedure consists normally of four stages, namely, (1) filling a complaint, (2) notifying the respondent, (3) reaching a decision/ recommendation/agreement, and (4) enforcing the decision/agreement.

The first stage of a CODR procedure is the filling of a complaint. It should be said that if the crowd participates in a CODR procedure as a third neutral party the complaint should not only be convenient for filling out, but easy to understand by the crowd. Otherwise, there is a risk that the decision will be taken irrationally by the crowd. Also, since disputants or members of the crowd may have difficulties understanding the complaint, there should be someone who is able to clarify the complaint to them. In a CODR procedure, this can be done either by appointed experts who will contact disputants and members of the crowd or by using another body built on the crowdsourcing principle. Since, using appointed experts will make the procedure expensive and slow, a good way for clarifying the complaint to the disputants and the crowd is by using another body built on the crowdsourcing principle. However, since the group of people participating in such body can also have difficulties understanding the complaint, it should be composed only from people having a legal or another background ensuring a good understanding of the complaint.

The second stage of a CODR procedure is notifying the respondent. But who should inform the respondent? They are two variants – (1) another body using crowdsourcing or (2) a CODR platform that is designed in such a way that automatically sends a notification to the respondent’s email/profile provided by claimant. The first variant is not used in any of the current CODR platforms. Another body using crowdsourcing will be able to search for contact information of the respondent if it is not provided by the claimant or if provided contact information is not accurate. However, if the members of the crowd that solve a particular dispute have access to the contact information of the claimant, this will threaten their impartiality, because they will be able to contact the

claimant outside the CODR platform. As regards the second variant for notifying the respondent, it is used in all of the present CODR procedures.

The third stage of a CODR procedure is reaching decision/recommendation/agreement. Here, two clarifications need to be made. First, assuming that the crowd has the function of a mediator or adjudicator it should be clarified how it will lead the CODR process. Second, it should be clarified how the crowd will reach decision / recommendation or how it would help the parties to reach an agreement.

As for the first clarification, at present, all of the open CODR procedures, allow every member of the crowd to ask questions to the parties. However, if a crowd is composed from many people and allows everyone to ask questions, the procedure will be extremely slow and cumbersome. Imagine that every member of a crowd composed from 100 people asks questions to the parties. Obviously, answering to every question can take a large amount of time, especially if the procedure allows rebuttal and surrebuttal. The first solution to this problem is to ask the parties only questions put forward by the majority of the crowd. However, in this case, the questions will not reflect the opinions of the entire group. The second solution 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 again not reflect the opinions of a diverse crowd. The third solution is to allow some of the members of the crowd which best reflect the diversity of the group to ask questions. In order to find members of the crowd which best reflect the diversity of the group, certain questionnaire can be given to the crowd and, on the basis of the results, the CODR platform can automatically find a representative group.

With regard to the second clarification, if CODR uses adjudication, the final decision can be taken after an aggregation of decisions taken by the crowd. The aggregation of decisions is an easy process which can be automatized, as it is in the case of the ECRF. However, if CODR allows deliberation, a group polarization and cybercascades can occur and lead to irrational decisions. If it does not allow deliberations, the opinion of a minority of the crowd may not be taken into account by the majority of the crowd. It will lead to a decision that reflects only the majority of the crowd, but not the entire group. CODR can be also designed to solve disputes

by using cooperation, which means that there would be no voting at all. Members of the crowd can provide their opinions which, without aggregating or modification, can be sent to the parties. Such dispute resolution process reflects the opinions of the whole group, but it cannot render a definitive decision. In fact, such a process can straightforwardly provide recommendations for solving the dispute to the disputants. Such a CODR procedure should not be underestimated. Recommendations can be quite helpful to the disputants because they can facilitate a settlement of the dispute. If CODR uses mediation or negotiation, the parties and mediator or facilitator may use information provided by the crowd in order to facilitate the process and reach a decision. For instance, the crowd's opinion may better inform them about their BATNA, which will facilitate the dispute resolution process.

The fourth stage of CODR is the enforcement of the decision. In this regard, it must be said that the outcome of a CODR procedure can be a recommendation, agreement, or a decision. If it is a recommendation, obviously, there is no need for enforcement. If it is an agreement, it will be binding on the two parties on the principle of *pacta sunt servanda*. If the CODR procedure leads to decisions, they can be enforced by private authorities. Such enforcement can be quite effective and should not be underestimated. Since the CODR procedure is in an experimental phase, at present, its decisions are not legally binding.

5. Conclusion

The process of solving disputes by collective intelligence is in its infancy. Taking into account the ECRF, CODR will probably become in the future the online judicial system of the online communities. They need such a judicial system because the basic principle of virtual communities is that the problems must be solved as much as possible within the online community itself (Kokswijk, 2010, p.241).

However, at present, the spread of CODR is limited not only by the lack of information about its existence, but also because of the lack of a theoretical framework of CODR that can be used for designing CODR platforms. In this regard, the present paper provides a basic outline of such a theoretical framework by

identifying and discussing four building blocks of every CODR system.

On the basis of our analysis above, we may conclude that, providing fast, democratic, and cheap dispute resolution, CODR has a potential that needs to be explored. CODR may set forth a new era in the dispute resolution. We speculate this to be an era in which disputes will be solved by the collective intelligence of world's citizens.

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Acknowledgements

The authors would like to thank Roel van Rijswijck, Joe McNamee, Krista Ivanova, Dan Manolescu, and Colin Rule for their comments and suggestions on earlier versions of this article. Moreover, they are grateful to T.M.C. Asser Institute and the Center for Law in the Information Society at Leiden University for their support.