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## **Social Intelligence: A new Perspective on Relational Law**

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This paper presents recent research on relational law, relational justice, social intelligence, crowdsourcing and crowdservicing. These concepts need further clarification, and they are presented as guidelines for the next step of the Web 3.0 and the Semantic Web in law and technology.

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## 1 Introduction

[Rz 1] It is for me a pleasure and a joy to join colleagues and friends to honor Prof. Dr. Friedrich Lachmayer. In this brief conceptual paper I will carry out a preliminary reflection on some concepts that turned out to be crucial for the research we are conducting at the UAB Institute of Law and Technology (<http://idt.uab.cat> ). It deals with cooperative features present in the behavior of consumers, customers, clients, citizens and, broadly speaking, users of Web Services on the Internet. *Social intelligence, relational law and justice, or crowdsourcing* are new concepts trying to capture human cognitive behavior and rationality through social networks. I will explore the way regulatory systems can be conceived as social systems, and designed and re-designed as regulatory models.

[Rz 2] For the sake of clarity, I will divide the explanation into four synthetic sections: (i) Relational law; (ii) Relational justice and regulatory systems; (iii) Regulatory models and social intelligence modeling; (iv) Crowdsourcing, legal crowdsourcing and crowdsericing.

## 2 Relational law

[Rz 3] Let's start with the following example, posted in a blog on contract law by NANCY KIM:

[Rz 4] «Relational contracting should be the subject of renewed interest given the new business models that incorporate goods, services, and information. On the radio yesterday morning, I heard someone talk about Google's business as being more than a series of searches it was about services and relationships with its customers. (Okay, maybe those weren't the exact words, but they're close enough). A few weeks ago, a NYT article discussed new technology companies that are assisting musicians in managing their relationships with their fans. In order to survive, many businesses (especially those in the creative industries) will have to reboot for the evolving marketplace. Not all businesses (and by «businesses», I mean musicians, writers and artists who want to get paid and are not backed by large corporate conglomerates) are equipped to do this. Well, make way for companies like Topspin, Bandcamp, FanBridge and ReverbNation, to assist them. These companies help musicians run a band's online business which means they sell music, manage fan clubs and calculate royalty payments. They have found a way to bundle physical and digital goods. How much you want to bet that those digital goods are protected by contracts?

[Rz 5] Which brings me to relational contract law. The purpose of these companies is to enable the musician to survive (and even thrive) without being backed by a record company. Now, the musician can directly manage the relationship with the fan. In the past, a fan joined a fan club, bought a ticket to a concert from one vendor, a record from a retailer, a tee shirt from another retailer you get the picture. With the exception of the rules on the back of the concert ticket and the fan club membership rules, the other transactions were not governed by contract. The fan

can now buy everything she or he wants that's band-related from that band's website, subject to the terms and conditions of the website and the licenses that accompany the digital products. Shouldn't the terms of those contracts be considered in light of the existing relationship between the musician and the fan? Wouldn't a relational contracts approach be helpful in analyzing the terms and how they should be interpreted and enforced?»<sup>1</sup>

[Rz 6] My apologies for such a long quotation, but it serves me well to show why relational contracts are back, and what lawyers mean when they oppose civil contracting to relational law.

[Rz 7] *Relational* is a common property that emerges from the existing social and economic bonds among companies, providers, customers, consumers, citizens (or digital neighbors).<sup>2</sup> However, it seems to be a pervasive quality, perhaps straddling too many genres and fields, from psychology to jurisprudence, and from political science to business managing and marketing studies. «Relational» has been applied not only to contracts but to sovereignty<sup>3</sup>, rights<sup>4</sup>, copyright<sup>5</sup>, governance<sup>6</sup>, norms<sup>7</sup>, and conflicts<sup>8</sup>, broadening up the field from private law to the public domain, and from anthropological «relational lens»<sup>9</sup> to political «responsive regulation».<sup>10</sup> *Relational* refers to the capacity to set up a common space of mutual relations a shared regulatory framework in which some reciprocity is expected with regard to goods, services, attitudes and actions. Thus, relational law is more based on trust and dialogue than on the enactment of formal procedures or on the enforcement of sanctions.<sup>11</sup>

[Rz 8] I am not going to delve into it right now. As said, it seems to me that we should settle first what kind of theoretical regulatory framework we are facing and from which point of view are we coping with regulatory problems (economy, political science, psychology or law). This kind of interpersonal behavior can, and actually is, envisaged and valued in acutely opposed ways from political philosophies praising the emotional side of dialogue and care like most feminist legal theories do or from the purely economic or managerial point of view that describe and measure the reality of the increasing negotiation power of executives that behave and stretch commercial and labor bonds far beyond the boundaries and guarantees of legal contracting.

[Rz 9] But this is not to say that a single specific domain may be sufficient to define the dimensions and layers of relational law. On the contrary, interestingly enough, since the beginning the relational perspective emerged from the interplay between lawyering practices, contract studies,

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<sup>1</sup> NANCY KIM, «Relational contracts and new business models», posted November 9th, 2011 at [http://lawprofessors.typepad.com/contractsprof\\_blog/2011/11/relational-contracts-and-the-digital-age.html](http://lawprofessors.typepad.com/contractsprof_blog/2011/11/relational-contracts-and-the-digital-age.html)(consulted January 30th 2012).

<sup>2</sup> I summarize in this point the explanation provided in Casanovas (2013a).

<sup>3</sup> STACEY(2003).

<sup>4</sup> MINOW AND SHANDLEY(1996); LUDSIN(2006).

<sup>5</sup> CRAIG(2011).

<sup>6</sup> ZENG et al. (2008), CHELARIU AND SAGNTANI(2009)

<sup>7</sup> Into consumer research studies: JOHAR(2005); in B2B relationships: BLOIS AND IVENS(2006); in relational governance: OTT AND IVENS(2009).

<sup>8</sup> WALLENBURG AND RAUE(2011).

<sup>9</sup> ROSS(2010), VIELLE(2012).

<sup>10</sup> BRAITHWHITE(2011, 2013) conceives «responsive regulation» as a relational process among all stakeholders, including the community of researchers.

<sup>11</sup> Following the well-trodden path from concrete and specific interpersonal framing to more universal values and principles, there is a contemporary move as well towards a general theory of law, covering all aspects of human beings as «relational selves» (NEDELSKY, 2011).

and socio-legal scholarship, alike. Both STEWART MACAULEY (1963) and IAN R. MACNEIL (1985) viewed contracts as relations rather than as discrete transactions looking at the evolving dynamics of the different players and stakeholders within their living constructed shared contexts. The notion of «relational thinking» emphasizes the complex patterns of human interaction informing all exchanges (MACNEIL, 1985). But this in fact does not disregard a more conventional notion of what law is or how lawyers think<sup>12</sup>. More recent studies confirm that there is no simple opposition or alternate choice, but different combinations in between: legal contracting and regulatory governance may intertwine, substitute each other, or co-apply.<sup>13</sup>

[Rz 10] This means that relational regulatory models are complex, and that their strength certainly stem from sources other than the normative power of positive law. Again, legal drafting, contracting and sentencing matter and can play changing roles within the system. I will call *regulatory systems* this set of coordinated individual and collective complex behavior which can be grasped through rules, values and principles that constitute the social framework of the law.

### 3 Regulatory systems and relational justice

[Rz 11] Regulatory systems are broader than their legal side because they include all aspects set by players in the social, political and economic games at stake.<sup>14</sup> They are situated, flow-driven, and work specifically in a multitude of similar but different evolving scenarios. They usually have a formal, explicit side and an implicit, tacit one. Information and knowledge management and coordination constitute additional important features too, as they often require a set of steps to be followed and certain sort of actions to be taken. As long as they contain procedural ways to solve and manage conflicts as well, they shape relational systems of justice.<sup>15</sup>

[Rz 12] *Relational justice* is thus the type of justice that emerges from the different conceptualizations, practices and strategic moves of the actors dealing with, managing, or solving a quarrel, dispute, conflict or fight within these situated contexts and frameworks<sup>16</sup>. Personal attitudes, moral and political beliefs are highly relevant in this kind of situations which can be initially unstructured and eventually embedded or plotted onto bigger organizational or social conflicts.

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<sup>12</sup> «The relational contract dimensions important in our inquiry are first, the everyday working of exchange relations and transactions, or contract behavior (the behavioral dimension); second, the positive law of the sovereign relating to that behavior (the legal dimension); and third, legal scholarship relating to that behavior (the scholarly dimension).» (MACNEIL, 1985: 484). For a good comprehensive summary of Macneil's work, see CAMPBELL(2004).

<sup>13</sup> POPPO AND ZENGER(2002); FISCHER et al. (2011).

<sup>14</sup> I have developed these ideas in CASANOVAS(2012, 2013).

<sup>15</sup> See also WIELSCH(2013: 198) «Legal reasoning must carefully identify all social references involved in a given case. Only when jurisprudence comes to recognize the full range of relations between rights and social orders does it actually observe the law as a system within an environment and enable the system as such to operate rationally. Only when the law takes into account all of the environmental references of a contract may it achieve a kind of «relational justice» that determines the relations between different social normativities in a responsible way. Relational justice takes seriously the independent normative claims of the social systems affected and their relatedness in a shared social environment.»

<sup>16</sup> See CASANOVAS AND POBLET(2008, 2009) for a more extensive treatment of Relational Justice (RJ), which we define broadly as a bottom-up justice, or the justice produced through cooperative behavior, agreement, negotiation or dialogue among actors in a post-conflict situation (the aftermath of private or public, tacit or explicit, peaceful or violent conflicts). The RJ field includes Alternative Dispute Resolution (ADR) and Online Dispute resolution (ODR), mediation, Victim-Offender Mediation (VOM), restorative justice (dialogue justice in criminal issues, for juvenile or adults), transitional justice (negotiated justice in the aftermath of violent conflicts in fragile, collapsed or failed states), community justice, family conferencing, and peace processes.

Institutions may be involved (or not) at different stages and at different times<sup>17</sup>.

[Rz 13] A conceptual distinction is needed at this point between *regulation* or *regulatory systems* and *legal institutions*.

[Rz 14] Let's put an example from the White Book of Mediation in Catalonia<sup>18</sup>. «Mediation» and «mediator» are legally defined in Europe by the EU Directive 48/2008<sup>19</sup>. However, our empirical findings showed the existence of an array of techniques and procedures in multiple domains private: commercial law; mixed with state agencies: consumer law; public: education, restorative justice, health, local administration, etc. which had been locally and autonomously developed by professionals, local powers and citizens around, upon, and above the conflicts *outside* the legal settings (Parliament and the Courts, e.g.), and independently of (but not necessarily in opposition to) the law. Broadly speaking, we found that the local behavior that had produced the settlement of literally hundreds of mediation units over the country was in fact a collective answer to the challenges faced by the Catalan society at the beginning of the 21<sup>st</sup> century.<sup>20</sup>

[Rz 15] Brief, single understandings, covenants and pacts cannot be isolated from their social environment. Some of them do not even need to be represented or framed in a conflict to get settled. Formal agreements are upheld by an underlying social substrate of complementary actions and social behavior. Accordingly, the mediation system literally emerged in Catalonia from the concrete actions of people involved in problems and deeply committed to achieve some acceptable solutions (teachers, doctors, social workers, etc.).

[Rz 16] We tested and counted up to 122.957 specific actions of translation, information, facilitation, integration, religious and cultural assessment that took place in 2008 at Catalan public hospitals and first care units. All these actions, both formal and informal, cannot be considered as proper mediations, but they perform regulatory and preventive functions. Therefore, they belong to the regulatory system that eventually led to the conversion of the mediation process into a legal institution able to produce binding effects between the parties. Fig. 1 draws schematically this difference, while Fig. 2 summarizes its inner dynamics: the crucial task is to identify the content of the *link* which produces social, political or legal bonds.

**Fig. 1**

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<sup>17</sup> See about all these aspects, LEDERACH(1997, 2005).

<sup>18</sup> <http://www.llibreblancmediacio.com/>.

<sup>19</sup> DIRECTIVE 2008/52/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 May 2008 on certain aspects of mediation in civil and commercial matters: «Article 3. Definitions: a. «Mediation» means a structured process, however named or referred to, whereby two or more parties to a dispute attempt by themselves, on a voluntary basis, to reach an agreement on the settlement of their dispute with the assistance of a mediator. This process may be initiated by the parties or suggested or ordered by a court or prescribed by the law of a Member State. b. «Mediator» means any third person who is asked to conduct a mediation in an effective, impartial and competent way, regardless of the denomination or profession of that third person in the Member State concerned and of the way in which the third person has been appointed or requested to conduct the mediation.» Cfr. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:136:0003:0008>(accessed January, 30th 2012).

<sup>20</sup> More specifically: (i) the demographic and social transformation of the Catalan society (basically due to big immigration flows); (ii) the crisis of the jurisdictional model of the Administration of Justice (due to heavy caseloads and delays), (iii) the commitment of the European Union as regards the mechanisms of dialogue, governance and soft law in order to find a regulation model not exclusively built upon the traditional political and legal system of the State.

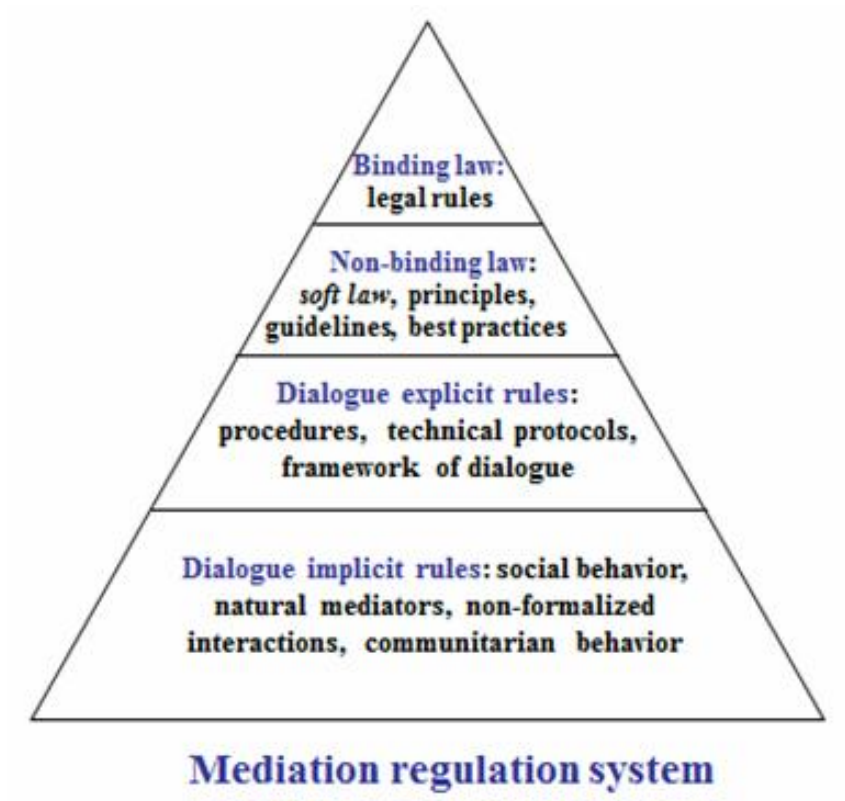
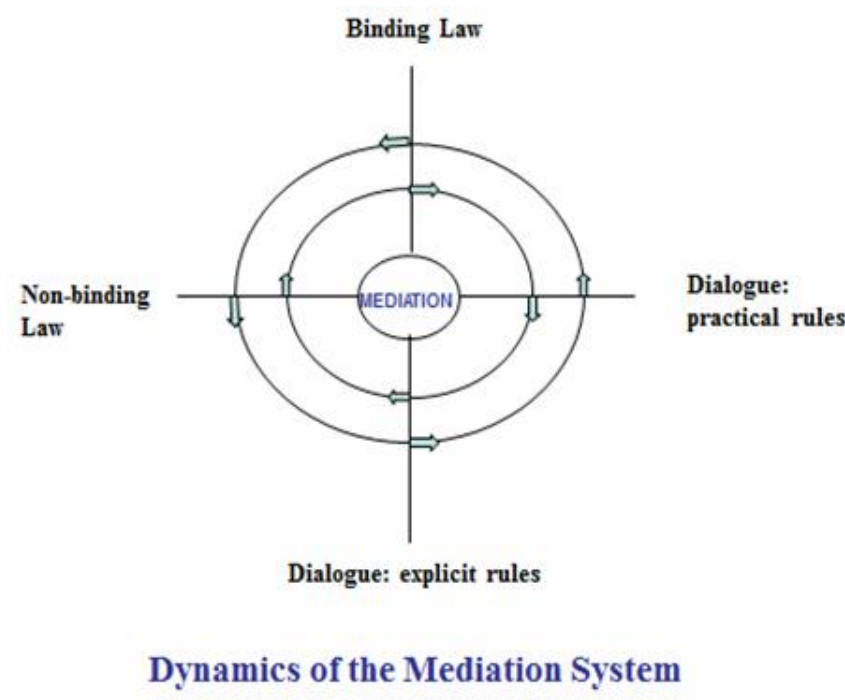


Fig. 2



[Rz 17] It is beyond the scope of this paper to define the content of the relational bond, but what

is expected from the counterparts, or felt as a duty or as a right, lies on the nature of the ties with the intervening organizations or administrative bodies (governance), with positive statutes and courts (legality), with the social environment (community), and with the different stakeholders in the dispute (conflict or agreement space).

[Rz 18] In Artificial Intelligence, agreement and all the processes and mechanisms involved in reaching agreements through negotiation and dialogue between different kind of agents (human and non-human) are also a subject of research and analysis (SIERRA ET AL. 2013). Interactions, transactions and the different procedural means to perform them is the subject of Agreement Technologies (AT).

#### 4 Regulatory Models and Social Intelligence Modeling

[Rz 19] The AT approach and design is grounded on the collective notion of social intelligence rather than on individual rationality. From a psychological point of view, social intelligence (SI) usually refers to the capacity to negotiate complex social relationships and environments, or an aggregated measure of self- and social awareness.<sup>21</sup> But from a socio-cognitive point of view, «traditional distinctions between the natural, the social and the artificial are becoming more and more blurred as radically new forms of Information Technology-enabled social environments are formed».<sup>22</sup>

[Rz 20] Recent work by CRISTIANO CASTELFRANCHI, CARLES SIERRA, ENRIC PLAZA, PABLO NORIEGA, JULIAN PADGET, MARC D'INVERNO, and many others, contribute to shape this view of a social mind which is not a mere aggregate of individual abilities, but a set of social affordances. Therefore, «social interactions organize, coordinate, and specialize as artifacts, tools; [...] and these tools are not only for coordination but for achieving something, for some outcome (goal/function), for a collective work. [...] We have to revise the behavioristic view of «scripts» and «roles»; when we play a role we wear a mind» (CASTELFRANCHI, 2013).

[Rz 21] Let's go back to the relation between AT, SI, institutions, and fundamental legal concepts. In this kind of social institutions, *validity* is not equivalent to *legality*<sup>23</sup>, and a technical system (i.e. a Multi-Agent System, MAS) has to be designed as a set of tools to comply with empirical requirements in a specific meta-model. Fig. 2 summarizes a general structure for such a meta-model. *I* stands for «Institution», *T* stands for «Technology», and PSM for «Platform Specific Model» (NORIEGA AND D'INVERNO, 2014).

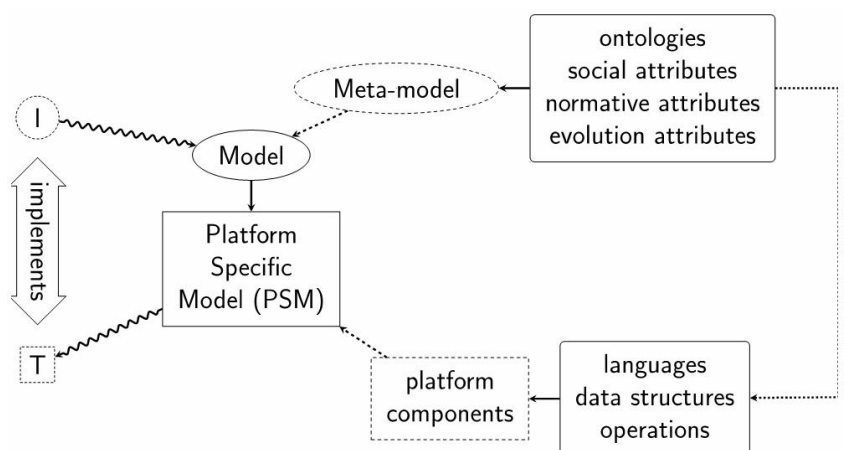
**Fig. 3. Institutional Design. Source: Noriega and d'Inverno (2014)**

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<sup>21</sup> See a summary at [http://en.wikipedia.org/wiki/Social\\_intelligence](http://en.wikipedia.org/wiki/Social_intelligence).

<sup>22</sup> See the European Network for Social Intelligence (SINTELNET), at <http://www.sintelnet.eu/>.

<sup>23</sup> CASANOVAS(2012), CIAMBRA AND CASANOVAS(2013).



[Rz 22] Following this approach, the specific regulatory model built up for a platform to fight organized crime at the EU CAPER Project<sup>24</sup> can provide an example of PSM. CAPER operates on Open Source Intelligence (OSI). The goal of the CAPER project is to create a common platform for the detection and prevention of organized crime through sharing, exploitation and analysis of open information sources (OSI). The platform has four major components: (i) data harvesting (knowledge acquisition: data gathering), (ii) analysis (content processing), (iii) semantic storage and retrieval, and (iv) access control.

[Rz 23] CAPER objectives are: (i) implementing a framework to perform the task of connecting multiple data sources with multiple visualization techniques via a standardized data interface, including support for data-mining components; (ii) enabling a quick and robust import of data types from disparate data sources in order to improve the ability of different Law Enforcement Agencies (LEA, national polices) to work collaboratively; (c) supporting pattern discovery, documentation and reuse, thus increasing progressively detection capabilities.

[Rz 24] This is an interesting attempt to coordinate collaborative information workflows among European LEAs. But it has to take place in compliance with national and EU laws, protecting the civil rights of citizens at the same time. Privacy and Data Protection are big issues. Thus, CAPER Regulatory Model (CRM) constitutes the institutional tool to regulate the functioning of the platform and to guarantee the compliance with rights and statutes. To construct CRM as institution, we assume the following notions:

- *Regulatory system*: a set of coordinated, individual, and collective complex behavior which can be grasped through rules, values and principles which constitute the social framework of the law.
- *Regulatory model*: a regulatory system design, in which hard law, soft law, policies, and ethics can be combined (or mixed up) in different degrees in a set of explicit or implicit guidelines for the interoperability of systems and the inter-communication and coordination of agents.
- *Validity* can be conceptually defined as a *second-order property*, a four-tuple function of ethics (justice), policies (efficiency), soft law (effectiveness) and hard law (enforceability), fostering the application of metrics to measure institutional strengthening, i.e. the coordinated organi-

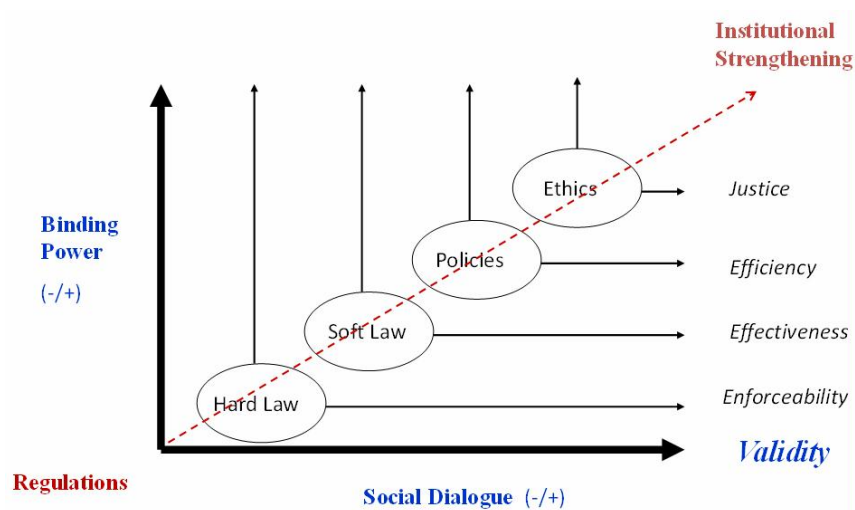
<sup>24</sup> CAPER is the acronym for «Collaborative information Acquisition, Processing, Exploitation, and Reporting for the prevention of organised crime», <http://www.fp7-caper.eu/>.



zation of components in specific platforms applying semantic technologies (among others).

[Rz 25] Fig. 4 plots the meta-model to draw the set of guidelines, protocols and rules that regulate the functioning of the information workflow in CAPER and produce the institutional strengthening of the system. CRM constitutes an example of regulatory coordination between different expert stakeholders. But as we will see in the next section, open social intelligence can be operated as well as a kind of problem-solving mechanism.

**Fig. 4. Continuum of institutional strengthening (CRM)**



## 5 Crowdsourcing, legal crowdsourcing, and crowdservicing

[Rz 26] In the new stages of the Web, the role of collective resilience to common problems cannot be underestimated. Openness, communication and *dialogue* are core to the Social Web and to the upcoming business models on the Internet. From this perspective, there is no difference between political participation, technological innovation, and economic growth. In all possible scenarios, a balance has to be made between expert knowledge and lay people participation.

[Rz 27] The term *crowdsourcing* was first introduced by JEFF HOWE in 2006 to refer to «the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call»<sup>25</sup>. Different types have been already distinguished in the literature.<sup>26</sup> But most of the more successful examples, like the Wikipedia or Twitter, may be defined as non-profit collective aggregation of information stemming from micro-tasks widely distributed across the Web, and freely performed by people.

<sup>25</sup> The rise of crowdsourcing, <http://www.wired.com/wired/archive/14.06/crowds.html>.

<sup>26</sup> GEIGERET al. (2011: 8) distinguish among different clusters of processes: (i) *Integrative sourcing without remuneration* (various forms of Wikis, user reviews, image tagging, or free user-generated content); (ii) *selectivesourcing without crowd assessment* (private -contributors do not see each other's contributions- and public design and innovation contests, in which one or a few winners are remunerated); (iii) *selective sourcing with crowd assessment* (contests that allow fellow contributors and other people to publicly assess individual contributions); (iv) *integrative sourcing with success-based remuneration* (used on store platforms that sell user-generated content -e.g., software, photographs, and designs- on the basis of profit sharing); (v) *integrative sourcing with fixed remuneration* (often applied to transactional tasks or micro-tasks, varying in complexity and often restricting the crowd of potential contributors).

Therefore, it implies much more than a new way to recollect information or to respond to labor offers or contests, following the Amazon Mechanical Turk or Microworks.com models.

[Rz 28] Crowdsourcing points at the personalization of services and applications. It creates a link between Web 2.0 (the Social Web) and 3.0 (the Web of Data), for it creates the conditions to transform the aggregation of individual information into the clustering, classification and enhancement of collective knowledge. Brief, it broadens up and enhances a democratic way of living and behaving in the global world.

[Rz 29] This is the main reason why people use it when they need it, reacting to events that concern them or into which they want to get involved. No measures based on routine or loyal customer behavior are accurate enough to capture this public dimension.<sup>27</sup>

[Rz 30] The broad democratic political model to be implemented cannot be taken for granted. It does not exist yet, as the integration between the regulatory forms of law, relational governance and what CHARLES PETRIE (2008, 2010) called *Emerging Collectivities* (EC) has to be thought on new basis.

[Rz 31] The challenge lies on the technological empowerment that the next steps of the Semantic Web, mobile technologies, grid computation, cloud computing, visualization technologies, geo-localization, and agreement technologies are able to bring to people involved in regulatory systems, and the way they can get profit and take advantage of them. Crowdsourcing can be expanded into *crowdservicing* (DAVIES, 2011).<sup>28</sup> It is close to ubiquitous computing and human computing (DAS AND VUCOVIC, 2011), and it grounds and fosters emergency responses, crisis and disaster management, conflict resolution mechanisms (ODR), democratic transparency, and the organization of legal distributed knowledge through an easier access to law, constitutional reforms, and political participation.<sup>29</sup>

[Rz 32] But how a human computer approach for law and regulatory systems can breathe a fresh air to legal models, the state, and the rule of law is a different issue to be faced in another paper. In the present one, my intention was introducing some conceptual notions that are useful to model regulations as networked interactions within the Web.

[Rz 33] **Acknowledgments:** SINTELNET COORDINATION ACTION (*European Network for Social*

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<sup>27</sup> See AKCORA(2010:9): «Twitter has faced larger traffic during big events like Mumbai bombings in India or US elections. Such sporadic events boost Twitter traffic not only by exciting frequent «posters» to post more, but also by drawing «inactive» users back to the site to observe the event and contribute to it. In this sense, a user cannot be regarded lost, as is the case with other web sites, because her inactivity can end in the face of an event that draws her attention. Hence, account removals due to «inactivity» should not be performed in Twitter.»

<sup>28</sup> «In my view, crowdservicing represents the full flowering of the augmentation concept [Engelbert]. Its technical infrastructure includes the evolving Internet and Web 3.0, emerging cloud computing platforms, Web-scale data management and semantic technologies, service-oriented computing, and Web services and their orchestration, computational agents, various interfaces to achieve programmatic access for availing crowd-based services, and diverse devices for user access.» (DAVIES, 2011: 94).

<sup>29</sup> «Crisis mapping is a brand new field that has recently emerged as a set of online collaborative practices to source, process, and visualize information and data on events that derive from natural disasters (i.e. earthquakes, floods, tornados, or bushfires), crisis, and conflicts. Generally, the goal of crisis mapping is to provide aid organizations, NGOs, human rights activists, etc. with open, real time, geo-referenced, actionable data to organize a more efficient coordination and response. The mapping of the conflicts in Libya and Syria, to mention two recent examples, has allowed volunteers and technical communities (VTCs) to document human rights violations that can be the basis for legal prosecution of war criminals. Crowdsourced crisis mapping, therefore, opens a new era where global volunteer and technical communities may significantly contribute to transform international law by bringing into the picture a new humanitarianism based on practices, emerging norms, and both global and local capacities.» (POBLET, 2013). Cfr. CASANOVAS et al. (2011), POBLET et al. (2013), CASANOVAS(2012, 2013b). Cfr. also <http://serendipolis.wordpress.com/>.

*Intelligence*) SINTELNET FP7-ICT-2009-C-286380; CAPER Grant Agreement 261712; DER2012-39492-C02-01 CROWDSOURCING; IPT-2012-0968-390000. CROWDCRISCONTROL.

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