How Online Games May Change the Law and Legally Significant Institutions

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INTRODUCTION

Online games have given us a whole new set of tools with which law and legally significant relationships can be created. The tools we first try out in the context of multi-player online games may open up fundamentally new modes of communication and collaboration. Games may show the way towards new kinds of legal texts, new institutional forms and, ultimately, new kinds of social order.

Our new computer and network capabilities won't change human nature or fundamentally alter governments, but they may well change the way we form and act in social and economic groups. They may allow creation of new kinds of organizations, including complex, stable institutions that ultimately may demand and deserve legal personhood. The creation of new kinds of legal persons could have a profound effect on all of our lives.

Let's examine how we might get from here to there.

Online Places Have Rules of Their Own

Virtual worlds have given us a sense that online "places" (particular screens that can be reached only in particular ways, sometimes only by particular groups, sometimes only under certain conditions) can have rules of their own. We've always had real world places that are associated with particular sets of rules: churches, courthouses, homes, stadiums, military bases, restaurants, and et cetera. As bandwidth improves and computer graphics become more powerful, it becomes increasingly easy to deliver the visual cues necessary to differentiate one online space from another. These spaces are often provided by non-governmental third parties. The nature of rules applicable to online activities is impacted by this in subtle yet important ways. AOL has a law of its

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own regarding user conduct (its "terms of service"). Ebay has a different set of rules. Everquest has still another. The use by virtual worlds of three dimensions and in-world physics — coupled with their persistence and development even while we are not present — reinforce our sense of the "placeness" of online locations. We may soon take for granted that the act of visiting a particular online space corresponds to submission to the special rules that apply to actions in that context, just as we understand that traveling to another country subjects us to its local laws.

Graphical Objects on the Screen Can Define Roles

Avatars have given us a sense that we can define new roles in the context of such rules. Online spaces are not merely virtual geographies — we see people, including ourselves, "there." Even the thinnest of graphical cues may serve to represent the role the user is playing (and her current state). When the cursor changes to a hand, or pointer, or insert bar or wand, that visual cue sends a self-referential message regarding the nature of the activity in which the user is or might be engaged. It's a short step from the cursor to the use of a graphical object that represents the user more explicitly and persistently. An avatar (or, indeed, any other graphical object) can change its state (color, size, costume, etc.) to reflect the state of mind, or intentions, or promises, or reputation, or circumstance, *or rights and duties* (!) of the user. And, as discussed more fully below, it's a short step from there to the creation of a graphic that can represent the relationship of a person to a social group. Ultimately, we'll use graphics to show the emergent state of mind of an entire group of persons who share a context. In short, rules and the roles they create combine to define a social context.

New Forms of Legal Writing

The development of graphical interfaces has enabled a new form of "writing" — graphical groupware — that involves decisions by users to place particular graphical elements in particular locations within a larger graphical environment. This "semantic placement" has the potential to give us a new form of asynchronous group communication. The key point is that graphical objects can "stand for" ideas or people or things — and that the placement of

such objects against a background (or, in effect, in a location in a particular online place) can communicate the relationship between such persons or things (or the view of such persons or things or ideas held by the person doing the placing). Online games use graphics to create an illusion of a "real world" of tangible objects located in relationship to one another. If we apply the metaphor of "objects" placed in a "space" to the intangible — to the world of ideas — new forms of graphical communication may open up.

If we dismiss overly "realistic" graphics, the semantic placement aspect of online games can be viewed as providing a sort of shared online diagram. Creation of a shared diagram is fundamentally different from the creation of shared documents, or even shared pictures of virtual worlds. A "diagram" has at least two layers — a background (which can provide a context or a metric) and a foreground (which can contain graphical objects that relate to identified ideas, persons or things) and are placed or controlled by multiple users. A dynamic online diagram has both the advantages of compact symbolism and the efficiency and richness of visual perception (the parallel processing of the eye allows us to see more, more quickly, than we can read). Non-pictorial graphics have previously been the stuff of math. One thing we have learned from the interfaces of games (particularly from the option of allowing graphical elements to be placed for purposes of communication with a group) is that complex non-pictorial graphical constructions can facilitate collaboration. If everyone in a group separately places "their" graphical elements against a background, and a composite view is "rolled up" by averaging these placements, the resulting pattern is an emergent representation of the state of mind of the group as a whole. Each member of the group may be surprised by the result the group has collectively created.[1]

The use of computation to alter the state of a dynamic graphic provides us with a new method for seeing emergent relationships between facts and conclusions and between individuals and groups. The modalities of the law constrain what it can express. When law is text, it can only be about things reasonably expressable in text. If the law could also consist of structured, dynamic pictures, it could

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1. *See generally* JAMES SUROWIECKI, THE WISDOM OF CROWDS (2004) (arguing that the result may be more accurate than the views of any members of the group).

express some kinds of legal ideas more precisely or accessibly. For example, a dynamic model of a contract or statute is capable of conveying legal relationships more completely, less ambiguously, more obviously, than traditional text. Putting a statute or regulation into the form of a graphical diagram forces disambiguation of the "or's." Making that diagram interactive allows a "user" of the law to play "what if" games that enhance comprehension.

Similarly, a dynamic organizational chart that shows patterns of relationships that emerge from networked interactions and decentralized decisions can change how we see — and how we think about — our involvement in social groups. Many of our most important advances have come simply from new technologies that allow us to see phenomena that were previously invisible to us. The shared screens of online games give us the beginnings of designs for a new legal microscope, telescope, radar. At a minimum, it seems likely that new graphical interfaces, based on what we've learned from online games, will help to make the intangible world of law and legal relationships more accessible to all.

Enriching Online Contracts

Long since, we've gotten used to those "click to agree" buttons. Oddly, few of those debating laws designed to make e-signatures binding have raised concerns about the lack of "channeling" — the absence of the signal provided by a "real" signature, its unusual formality implicitly warning that there may be potentially serious consequences from entering into a contract. We might reasonably be concerned that the screen does not offer rich enough cues to give users a sense of when they should be careful. What is the minimum required electronic indication of assent? Does it make a difference that your avatar can now nod in agreement, or virtually shake hands? For now, our ability to challenge any credit card charge helps mitigate the dangers. But online games provide richer contexts — and may create new traps for the unwary. Maybe we'll insist that, in order to bind a user to significant obligations, avatars be made to appear to use a virtual pen to sign a virtual document. We might come full circle.

Once we take the screen seriously as a context in which legally significant relationships can be formed, there are many options in

addition to indicating agreement with a contractual text. We can drag an online "object" to a semantically significant location — the "buy this" bucket, or the location that says another party may have that particular item or concession. Or we can indicate subtle shadings of opinion on various alternatives by arraying the objects representing all alternatives along axes that represent different views (e.g., the extent to which the user favors or disfavors a particular contract term or option). We already click to vote. Why shouldn't we also drag and drop to indicate various shades of opinion, or commitment, or willingness to accept various roles, or agreement to provide compensation to others who do so. If I place my avatar into a particular unoccupied seat at a virtual table, that may constitute acceptance of a particular role or job (with corresponding rights and responsibilities in relation to the rest of the group admitted to the online space in question). Surely we will develop new visual/ graphical forms of consent to contractual relationships.

From Contracts and Games to Organized, Persistent Entities

Contrary to often parroted doctrine, most legally respectable social organizations have arisen from private custom or agreement, rather than from a charter granted by the state. Even corporations (joint stock companies) basically arose long before the sovereign purported to license them. To be sure, the state must decide to respect and defer to an organizational form if it is to be viable. The difference between a corporation and an illegal conspiracy is just that the state refuses to allow the latter to persist (and won't protect its bank account). If we can form contracts online, we can form legally significant organizations online. The interesting questions are whether the new electronic medium through which we meet, contract and collaborate may lead to new and different types of organizations — and whether governments will defer to them.

In a sense, it already has. Yochai Benkler has explained why peer production flourishes in an online environment where the cost of finding opportunities to add value to a shared informational commons is dramatically reduced.[2] But peer production is now really "just" a new mode of production, not a new organizational form. It will only really become a new persistent organizational

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2. *See* Yochai Benkler, *Coase's Penguin*, 112 YALE L.J. 369 (2003).

form insofar as online groups discover how to collectively appropriate the product of their shared work. Such groups might form, in effect, an emergent producers' cooperative, in which self-selecting producers collaborate to decide both how to create valuable work product together and how to capture some of the value of their shared work product in the context of a larger marketplace.

What does this have to do with games and graphics? The fundamental challenge for any organizational structure (or market or mode of production) is figuring out how to allocate particular tasks to particular people (and how to coordinate related tasks and people). The new "visibility" of social relationships provided by game-like interfaces may provide an answer. Graphics can be used to represent both a task (let's say with a box) and a person (let's say with a circle or a face). Put the circle/face in a box and you've got a work assignment. That could be done by a supervisor. But it can also (perhaps more cheaply) be done by the person undertaking to do the work. If work is divisible into small chunks, this allows a movement away from large-grained employment contracts towards finer-grained "jobs." If the workers self-select, the online place may produce emergent teams. If the teams can use graphics to allocate the "ownership" interests in their joint work product, this may result, in effect, in emergent corporate (or cooperative) organizations. Even if the teams disperse, the resulting "organization" might persist insofar as their work-product retains value vis-à-vis the external marketplace and some mechanism remains for making decisions on how to realize that value and distribute net proceeds.

The Persistence of Graphical Online Places

One striking attribute of multi-player online games is that they persist and evolve even in the absence of a particular player. That same attribute is also a most striking feature of corporate entities of all kinds. The difference between the two may be just that we have learned how to realize one in graphics, while we typically realize the other (the corporate entity) in text. Both may evolve towards an appropriate mixture of graphics and text, on the asynchronously shared, persistent screen.

There are many possible approaches to creation of what we might call an organizational interface. As noted, the consequences

of undertaking and completing a job can be represented graphi-
cally, perhaps with backup text as necessary to explain the conven-
tions in question. We already regularly communicate online
applause — reputational feedback sufficient to motivate many con-
tributors to open source projects (think eBay ratings). But that
doesn't exhaust the possibilities. We might exchange more than
applause. We might create an online knowledge assembly line at
which all who can add value may find their most productive places,
from which those who contribute substantially might reasonably ex-
pect to receive financial compensation. The simple elements of
agreement, roles and communication of task status, all conveyed
with dynamic graphics, can combine to create something much
more complex — a persistent social/economic organization.

Managing Assets Created by Online Groups

Any effort to collectively appropriate the work product of col-
laborative online production would require the group in question
(the producers) somehow to arrange to make joint decisions about
how best to exploit their property in the wider market. A tradi-
tional corporate structure would do this by delegating decision-
making to agents, top down. The online game environment sug-
gests another possibility — emergent "management" of jointly
owned assets, by means of direct (or proxy) voting by a persistent
group of constantly shifting composition. Games can create a new
kind of agent — not in the top down principal and agent sense but
in the bottom up sense that decentralized decisions of individual
contributors can be computationally cumulated into decisions that
bind the group (with respect to the disposition of its collective work
product) over time.

The net allows us to pool effort, not just capital. Shares in the
resulting proceeds are not necessarily securities (within the legal
meaning of that term), because they do not depend for their value
solely on the actions of others. Should we characterize online col-
laborations as partnerships? That would substantially deter valua-
ble collaborations, because it is our received doctrine that partners
are liable for each other's actions. So we quickly come upon an old
question in this very new context — should we provide "limited lia-
bility" for those who contribute their time and effort (not capital)

to a collective online enterprise? Drawing on the longstanding debate about corporations, we might suspect that the answer turns on whether the limitation can be made visible enough — so that those dealing as outsiders with such entities will be warned and will remain free to decide whether or not to take the risk.

Visualization of Law and Legally Significant Decisions

One of the key challenges facing any attempt to create online organizations of any kind is the need to make the rules that define various roles clearly enough for all to see. This may be one place in which visual contextual cues and the interactive character of the screen become very important. As noted, it is possible to translate an authoritative text into a series of interactive "fact" buttons that, when toggled, turn appropriate legal conclusion buttons on or off. Expressing a set of rules as a dynamic virtual (software) machine has the potential to reach more users, many of whom might only tune out if required to read a traditional legal text. More importantly, the rules applicable to a particular online place, once learned, need not be repeated — because entry into an online place will itself signify agreement to abide by the standard (and well enough understood) terms.

In some cases, the combination of user input and network connectedness may enable a new source of authoritative rulings: the online jury. If the question presented is what is "reasonable" in a particular online social context, maybe we should use our newfound ability to ask the relevant group that question! (The obviously relevant group consists of the users whose interests and values the online space in question is designed to serve.)

Whoever makes the decisions, we'll need to overcome one key current problem for any form of online decisionmaking — getting even a small group to make decisions together online requires too much text. Real world meetings are bad, but online meetings (to produce real decisions and buy-in) are even worse! Why? Current systems don't provide enough feedback regarding the state of mind of the group. Here again, the lessons from online games will prove important.

The most important aspect of the screen used in multi-player online games is the fact that a group of people are looking at it and

treating it as the context for their own actions and comments. In the military, they call this "situation awareness" — a shared image that dramatically increases communications efficiency. In the online context, the "situation" in question is the online context itself and the state of all participants. When a shared image is used to represent the state of mind of the group itself, a new kind of collaboration results. Each individual reacts in relation to his or her relationship to the group. Effective online group decision-making becomes possible.

From Online Organizations/Entities to Legal Personhood

However we use the new affordances of the screen to form legally significant relationships, it appears very likely that we will begin to enjoy a more explicit, self-referential view of our mutual undertakings. When we act together in groups, we often do so in ways that create persistent identity for the group itself. When we act in groups online, we will end up creating composite entities that seek rights and duties independent from those of particular individual participants. How will the (traditional, offline) law react?

If the affordances of online games (graphically conveyed roles, the new writing by means of semantic placement and the computationally-determined location and state of graphical elements) enable us to create new kinds of organizations, then we'll face the question whether and to what degree to grant these organizations legal personhood. Will an online game, active as a collective, be allowed to open a bank account? What ultimately distinguishes a game from a corporation? If the participants want to act collectively, with respect to the external world, for purposes that we would not otherwise brand as illegally conspiratorial, why shouldn't we let them do so? If the rules are clear, the roles established and otherwise permissible, and the status of the entity as a limited liability sharing of time and effort are disclosed to those with whom the entity deals, why shouldn't that new kind of "web of contracts" be respected?

Some might respond that it's easy enough to "touch down in Delaware" and adopt a standard corporate form for any activity one might engage in online. But I don't think it is that simple. Most corporation statutes require traditional ownership and the appoint-

ment of named officers with particular powers. These laws do not anticipate emergent decision-making by a group with constantly shifting members. Unincorporated associations of various types are recognized by the law, but perhaps without the necessary assurance of limited liability or the desired ability to bring suit to protect jointly owned property rights. I think the law will have to adapt to take into account new ways of "owning and controlling" the end product of our new electronic modes of production.

We will clearly not be dealing just with "legal fictions" or "mere games." Groups that coordinate their activities online can take action that impacts the real world. The growth of "smart mobs" is an early example of use of the net to coordinate collective action in the real world.[3] If the next "smart mob" were to cause a group to come together to raise a barn, or write a song, who would own the work product? Is that a function of the terms of the online notice? Could the group's work product be sold? What mechanism would be used to set the price? If the "mob" came together, solely online, using electronic tools to do collaborative work, would the ownership and control of their collective product stem solely (or primarily) from the rules of the online context (virtual place) within which they assembled?

Collaborative work is at least as old as our first efforts to surround prey to increase our chances in the hunt. We can now assemble online, from all over the world, to perform many different kinds of collaborative work. How can we not begin to exploit this new potential? If what is necessary to make it happen is legal recognition of the assembled collective having rights *of its own* to the fruits of its labor, we'll give such entities rights (and corresponding duties). The resulting increased stake of individual contributors in the online enterprise will make it easier to enforce whatever rules make this new form of collective productivity possible.

New Types of Organizations?

Perhaps an even more interesting question is whether the flexibility of the screen will allow us to create institutions that have a more diverse set of goals than do our current organizations. Cur-

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3. *See generally*, HOWARD RHEINGOLD, SMART MOBS: THE NEXT SOCIAL REVOLUTION (2002).

rent (non-governmental) organizations that claim legal personhood tend to sort into two distinct piles — those dedicated to seeking profit and those established for what some local sovereign considers permissible "non-profit" purposes. Online groups might blend these two types in unpredictable ways — e.g., collectively creating an intellectual work product for fun and profit and the betterment of the world. Is online collaboration to create an annotated map of the world, complete with links to local pictures, a game? What if non-contributors were charged for access to the map, with the proceeds shared by those who contributed data or pictures?

The ultimate question posed to local sovereigns will be how to sort out those collaborative activities that should be discouraged from those that ought to be welcomed and legally recognized and enabled. One possible determinant of the answer to that question will be whether the activities of the group primarily impact willing participants (or parties whose well-being is sought by the group). Because online groups can form and act easily across physical boundaries, there is in this online context less than the "normal" assurance that their activities will primarily impact those who participate. It's one thing for a state to defer to local churches, charities, and clubs. It's quite another for a local state to defer to a group that might consist entirely of non-citizens, taking action that might well affect many who have not voluntarily joined the group. Regardless of how we deal with these challenges, it will be important to be able to see what is happening. The use of graphical, game-like interfaces for collaborative action may thus provide part of both the problem and the solution.

CONCLUSION

If the law is about the collective creation of rules that define roles that guide and enable collective action, then multi-player online games surely involve, create, and will inform the law. More importantly, if games are collective activities engaged in through roles established by rules, then our new appreciation for how best to design and play games online will lead to new insights into how best to create new social institutions of various kinds.

Some of the new organizations we form online will be more visible than any we have created, offline, in the past. We will begin

NEW YORK LAW SCHOOL LAW REVIEW   [Vol. 49

to see the social fabric, and our own place in it. How we will react to a gaze into this new mirror is anybody's guess. I'm hopeful that we will be encouraged to take actions that make us proud of what we see. And, I hope that we remember to use our collective imaginations to the fullest, because what shows up in that mirror won't be limited to the organizational forms that our previous ways of writing, our previous ways of forming contracts, and our previous ways of playing roles and sharing decisions, made possible.