# Value Propositions

*http://www.thepaywall.com*

**Alejandro Kauffmann**
Interactive Telecommunications Program (ITP)
Tisch School of the Arts
New York University

## ABSTRACT

*Value Propositions* is a playful exploration of value online. It co-opts the paywall as an artistic form to make a complicated economic argument intuitive and experiential. *Value Propositions* locates the Internet's value in the interaction with online content rather than in the content itself, and demonstrates how impeding the exchange of information online, however accomplished, severely limits the value of the Internet as a whole.

## KEYWORDS

Online content valuation, paywalls, awesome, future of media, web art, custom web browser.

## INTRODUCTION

Of late, the news has resounded with corporate clamoring for "monetization" of previously free online content, with looming threats of proprietary formats and online payment gateways—so-called "paywalls"—raised to protect the profits of media conglomerates. The *New York Times*'s announcement in January of 2010 that it would follow the lead of the *Wall Street Journal* and begin charging online readers for access to its site[1] was met with a great deal of commentary and prediction—both of success and of failure. Naysayers pointed to failed paywall experiments such as *Newsday*'s, which after three months managed to entice a meager thirty-five subscribers[2], while other media commentators countered with the example of Apple's iTunes store, which has successfully convinced many potential pirates to turn their backs on BitTorrent in favor of the ease and convenience of legal (and paid) downloading.[3]

The latter argument skirts the real issue by moving the discussion off the web. The iTunes store is not an online content provider; it's an online marketplace, and that's an important distinction. People buy songs from iTunes, movies from Netflix, and e-books from Amazon to consume offline. They aren't paying for movies and music and books; they're paying to have something to listen to on their iPods, something to read on their Kindles, and something to watch on their TVs. This model privileges the Internet's role as a distribution network over its role as a medium proper, which is only sustainable in the absence of ad-supported online alternatives and open-sourced media devices. Hulu.com and the new crop of Android smartphones may eventually reverse the trend.

Apple's iDevices and AOL-like repackaging of online content represent clever sleight of hand. "Pay no attention to the web behind the curtain," they say, diverting attention from the real problem, which is not that people won't pay for movies or books or music or news anymore, but that they don't want to do so online. *Value Propositions* aims to understand the value of content consumed on the web by employing conceptual paywalls to determine whether that value can ever be translated into monetary terms, and if not, what that means for the future of the web.

## BACKGROUND

This project grew out of an impulse to explore black boxes—systems whose inputs and outputs are clear but whose workings and the processes that transform input into output are not. My initial goal was to create something that would mystify, that would awaken a sense of bewildered wonder in even the most technologically literate audience.

The world of finance and money seemed like a rich place to start exploring. Though I set out with the intention of creating a counterintuitive financial transfer system—a "PayEnemy" instead of a PayPal—subsequent research, reading, and conversations pushed me away from considering money's transfer and accretion and towards its role as an abstract vessel of value. Money itself is the ultimate black box. And I decided to take a look inside.

In most modern economies, supply and demand determine price; but price and value are not the same thing. Money both abstracts and obfuscates value. What something is worth is rarely what it costs. Corporations take advantage of this blurry boundary to extract profits from the so-called "emotional benefits" of their brands. Medieval alchemists

[1] http://www.nytimes.com/2010/01/21/business/media/21times.html

[2] http://www.techdirt.com/articles/20100126/1515217905.shtml

[3] http://www.cbsnews.com/stories/2010/01/20/tech/cnettechnews/main6121468.shtml

never managed to physically change base metals into gold; they might have succeeded had they concentrated instead on changing people's perception of the value of lead.

In his slim but dense volume *Value*, British economist Michael Allingham tersely defines value as "the amount for which a thing can be exchanged."[4] Value presupposes exchange—it has no measure otherwise. Things that have value are those that are "both useful and available only in limited amounts."[5] It's not enough for a thing to be scarce and useful, however. Someone must want it and be willing to exchange something for it. In this sense, the perception of a thing's value is its value.

This has important ramifications for value online. Because of the very nature of the web, information that is available anywhere online is available everywhere and to everyone, as countless hackers have proved repeatedly by breaking into supposedly secure government and corporate sites. Scarcity simply does not exist online.

Existing value models break when there is infinite supply. In the words of French mathematical economist Léon Walras, who died more than half a century before the first computers were connected to the Internet:

> *Useful things available in unlimited amounts… cannot be controlled, for even if someone wanted to withdraw them completely from the public domain he could not do so; and secondly, there would be little point in obtaining a small part of them and leaving the rest for everyone else…. Once scarce things have been appropriated (and they, and only they, can be appropriated) they have a special property relative to each other in addition to the utility they give, that of being exchangeable for each other.*[6]

Is there a fair price for an infinite resource?

The answer depends on what Allingham calls preference, on the willingness of an economic agent to pay for something he perceives as valuable. Media companies believe that charging for content creates this perception, but economic thinking suggests otherwise.

Consider a mathematical definition of value used by "value engineers" such as this one from *Value: Its Measurement, Design & Management*[7]:

$$value = \frac{need \times utility}{cost}$$

**Equation 1. Shillito's value equation**

In a web without paywalls, the cost of accessing content is zero. Dividing by zero is a mathematical no no. It causes computers to crash and mathematicians to stutter something about undefined functions before waxing philosophical on the nature of infinity. The value of something without cost, regardless of its utility or the need for it, is literally incalculable. Putting a price tag on it immediately reduces its value to nearly nothing, as shown in **Fig. 1**. "Maximum value is achieved when essential function is obtained for minimum cost."[8]

This is only the case from the vantage point of online content's consumers. There is a cost associated with the content's production which would lead its producers to expect it to have a finite and definable value. They want to pass that cost on to consumers, but in trying to do so by charging, they actually decrease the value of their content and thus the likelihood that consumers will ever pay for it.

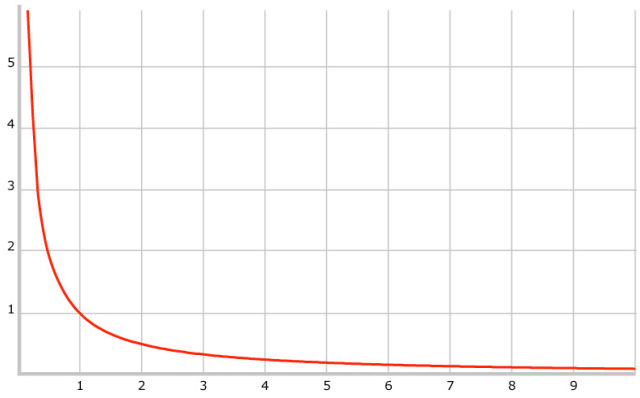


**Fig. 1. Value (on the y-axis) vs. Cost (on the x-axis)**

Despite its rational soundness, this argument smacks of sophistry; it's difficult to explain and unlikely to sway any but the most philosophically inclined media moguls.

*Value Propositions* is a more intuitive explanation of why consumers and producers of online media have divergent views on its value.

## PROJECT DESCRIPTION

> *To embark on a quest fully aware of its impossibility and completely unsure of its value is, generally speaking, a folly. It is a foolish act, lacking good sense. However, this experience can be used to draw attention to failures within our cultural system.*[9]

Politicians and salespeople know that to persuade people, you have to speak their language. *Value Propositions* adopts and co-opts the media companies' paywall as an artistic form to examine the value of online content experien-

[4] Allingham, 1.

[5] *Ibid.*, 5.

[6] Walras in Allingham, 99-100.

[7] Shillito and De Marle, 9.

[8] *Ibid.*, 17.

[9] Larsen, 61.

tially. The result is a collection of alternative paywalls that subvert fundamental and distinguishing characteristics of the Internet while underlining the sources of its unique value.

**The Internet is immediate**
The Internet provides an unprecedented source of instant gratification for virtually any informational or entertainment desire. Search engines and ubiquitous broadband connections have nearly eliminated the feeling of knowing some piece of information exists but not knowing where to find it.

*DelayWall*
DelayWall imagines a web in which all content is free, but to download it, its consumers must wait the time it took to produce. Accessing a manual might take three months; downloading a book, up to ten years.

**The Internet is encyclopedic**
Rarely if ever does a web search yield no results, no matter how obscure the topic.

*DossierWall*
Behind a DossierWall, the web only displays information on a certain topic—recipes or financial news, for instance.

**The Internet is current**
The web is the world's running stream of consciousness. Constant updates and inexpensive technologies make it possible to instantly archive the now. A live broadcast previously required expensive equipment and access to television airwaves; now it requires a camera-enabled phone—and the "live print" that threatens to bury us under mountains of unread tweets was inconceivable just a decade ago.

*DecayWall*
DecayWall blocks new content on the web until it has aged sufficiently to be no longer considered current.

**The Internet is permanent**
With so much "mission critical" information at stake, redundant backups are the norm. Burning down today's Library at Alexandria would require much more than a match.

*MIAWall*
When content is placed behind an MIAWall, it is accessible only to a predetermined number of users before it is permanently destroyed. Content is literally consumed.

**The Internet is effortless**
It takes little effort and almost no money to publish content of any kind online, and even less to find and consume it.

*ValetWall*
ValetWall imposes a Marxist view of the value of labor onto the web. Instead of requiring consumers to pay for content, ValetWall asks them to perform physical or mental labor before it grants access to content, using biometric indicators such as heart rate, body temperature, and sweat to quantify the labor produced in the former case and task-based measurement in the latter.

**The Internet is global**
The world's banks, movie theaters, concert halls, libraries, chatrooms, and stores are open all day everyday to everyone, regardless of location.

*JoseWall (also SergeiWall, RenéeWall)*
A JoseWall relies on IP logging to limit web browsing to sites hosted in the user's geographic vicinity. Internet hubs such as San Francisco and Tokyo would be largely unaffected, but much of the rest of the world would become an online backwater.

**The Internet is unlimited**
Barring server outages and unusually heavy traffic, any online resource is available to all users who wish to access it, even if they choose to do so concurrently. The supply exists, regardless of demand.

*DueBackTodayWall*
DueBackTodayWall envisions an Internet in which only one person can interact with a particular resource at a time. Reading the newspaper would be like trying to get a table at a New York restaurant on a Saturday night.

**The Internet remembers**
The ever-decreasing cost of already inexpensive digital storage means that there is little incentive to take content offline once it's been published, and the Internet has become the world's preeminent archive.

*TodayWall*
Content behind a TodayWall is accessible only on the day of its publication. After that, it disappears. Sorry you missed it, you should have been there.

**The Internet is flat**
There are no hierarchies online. Anyone who has access to the web is as much on the web as anyone else.

*ClayWall*
ClayWall creates a web that is invite only, strictly VIP. Who you know is what you know. Access to every site requires the endorsement of several current users.

**The Internet is self-determined**
No one dictates what anyone else has to look at online or in what order. In most of the world (China being the glaring exception), users are free to browse as they please.

*BuffetWall*
BuffetWall doesn't eliminate choice, but it does require that a critical mass of users ratify it. Online resources become accessible only when a predetermined number of concurrent users tries to access them.

**The Internet belongs to no one**
And it belongs to everyone. Putting up paywalls sets an alarming precedent that could snowball into a fractured Internet purchased in packages much as cable television is today.

*PreyWall*

A PreyWall gives consumers of online content the same power as its producers, allowing anyone with Internet access to charge for any content, regardless of its provenance.

There is an abbreviated description of additional walls in the Appendix.

## IMPLEMENTATION

*Value Propositions* is a conceptual project intended to make people think through use. I describe it as an experiential argument. Because there are two groups in the paywall debate—those protected by the paywall and those impeded by its hard cold face—I sought to allow each group to experience the other's position. All the walls are intended to interfere with a normal consumption of web content. In addition, by allowing consumers of content to set up paywalls of their own, PreyWall lets them to switch roles and take a guard shift on the ramparts.

Not all of these alternative paywalls exist in working form, but all of them are feasible. Some already exist in different forms online: 4chan.org, which does not archive content, is a working model of MIAWall, and the private beta model that many fledgling dotcoms adopt is reminiscent of ClayWall. I saw no point in remaking them. Others, such as DossierWall, work as well conceptually as they would in practice, so it seemed unnecessary to implement them in code. The walls I chose to build are those that most clearly alter users' habitual interactions with the web. They were built using a combination of PHP, MySQL, and JavaScript, and most can be tried out at http://www.thepaywall.com.

The important exceptions are PreyWall, which I discuss below, and DelayWall, which because of download throttling on most commercial hosts must be installed on a local server. I have provided the necessary code and documentation for interested users to do so at the address above.

PreyWall deserves special mention because I conceived it as an ongoing experiment to collect usage data. I wanted to create a believable user experience and an incentive for repeated use, and I felt that accessing a scraped version of the web through my domain (which is how the other walls work) would not be compelling enough. I considered using Greasemonkey to add a layer on top of Firefox, much as web annotation tool ShiftSapce.org does, but opted instead to build a custom web browser that provides an entirely believable web experience and adds a game-like element on top of browsing to encourage its adoption.

BuyerFox is a simple Webkit-based browser written in Objective-C that runs on Mac OS X and transforms the web into a kind of online Monopoly board. All users start out with a set amount of money and receive a small daily allowance. After they create a username and password, they can begin browsing the web as they would with any other browser. Almost. The difference is that users can stake a claim to any previously unclaimed site by pressing the "Claim it!" button next to the navigation bar. They are then prompted to choose a monetization model (one-off, subscription, lifetime payment) which in turn determines the site's daily upkeep costs. When a user arrives at a claimed site, s/he can decide whether to pay for access based on the owner's selected monetization model or whether to browse elsewhere. If a user runs out of money, all of his/her sites revert to the public domain. BuyerFox works by intercepting all URL requests and checking them against a database before either allowing them, if the requested site is unclaimed, or redirecting them, if it is not. After a round of user testing which will start with a well-publicized land grab launch, I plan to experiment with other features, such as access bartering (you can access the site I own for free if you'll give me free access to the site you own). My hope is that the record of purchases and strategies will provide new and useful insights into the nature of online value.

## INSPIRATION

*Value Propositions* draws heavily on the economic theories of value discussed in the introduction above, and on the work of artists reacting to their peculiar role as producers of intangible value. Four vacuum cleaners sold recently for over $11 million[10] because Jeff Koons put them in an acrylic box.

There are many less extreme examples of the artist's Midas touch. In 1961, Italian artist Piero Manzoni canned his shit and labeled it "Merda d'artista." The cans now are extremely rare and sought by collectors who pay thousands of dollars for them.[11]

On his website nycgarbage.com, Justin Gignac packages and sells New York City trash for $50 (double for special edition trash—opening day at the new Yankee Stadium, for instance). Though many artists have commented on their relationship with the art market, to me this transformation of trash into treasure is the ultimate example of artistic value creation.

Sean Landers made an art piece of the letters he wrote to the company holding his student loan complaining that he didn't have enough money to pay. The letters' sale ultimately paid off the loan.

Spanish artist Santiago Sierra takes a slightly darker approach to value, paying heroin-addicted prostitutes to get tattoos or hiring illegal immigrants to stand around at his shows holding up a monolithic log against a wall. The abstracted value that money represents is made real in a way that makes most people very uncomfortable.

Recent RISD grad Caleb Larsen, who garnered attention for his *A Tool to Deceive and Slaughter*, a sculpture that sells itself on eBay (most recently for about $6500), makes art of transactions. *Donor Plaque* commemorates the people who contributed to its creation while *The Financial Footprint of*

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[10] http://www.christies.com/LotFinder/lot_details.aspx?intObjectID=5074053

[11] http://en.wikipedia.org/wiki/Artist's_Shit

*the Artistic Practice* consists of an agreement in which a collector agrees to assume responsibility for all of the credit card debt incurred by the artist's work.

I'm not aware of any precedents for my particular approach to online value other than con men who sell things that don't belong to them, but I found kindred approaches to other Internet-related themes in the work of Jeff Crouse and Jonah Brucker-Cohen.

From a technical standpoint, I drew heavily on sites that appropriate other sites. Shiftspace.org is the most prominent example, though I'm also partial to bacolicio.us and cornify.com. In addition, I've made several projects that either scrape the entire contents of a site and reproduce it[12] or use iframes to embed pages within other pages.[13]

## CONCLUSION

Why does a can of shit command 124,000 Euros or a crumpled metrocard and a Starbucks coffee cup cost fifty bucks? It's not the content that determines these works' monetary value. Manzoni never convinced collectors that his shit itself was valuable (in fact, the cans were actually filled with plaster), nor did Gignac magically transmute garbage into gold. They simply changed our customary relationship to this content and made us aware of that change, which is exactly what paywalls do on the Internet. The difference is that artists make worthless objects valuable while paywall-obsessed media moguls do the opposite.

Anyone who reads about or interacts with my paywalls is immediately struck by their absurdity. The obstructions they impose on the Internet make no sense. The content on the Internet is valuable precisely because it's free, unlimited, and ubiquitous. Payment is just one more nonsensical obstruction.

There is plenty of money to be made online providing services that enhance the web's inherent value, as Netflix, Apple, Flickr, and Skype can all attest. But as Caleb Larsen's self-selling sculpture so dramatically points out, value is created in exchange. The currency of the Internet is information, and meddling with its free exchange can only hamper its value.

Everything above ignores one important locus of control—access to the Internet itself. It assumes that the web will remain content agnostic despite recent judicial setbacks to net neutrality. It also assumes that attempts to control the Internet such as China's Great Firewall are doomed to fail. The alternative, that corporations might try to establish their paywalls at the level of infrastructure, would spell the end of the web and is too grim to consider.

I'd like to close instead on an upnote with a quote from Arthur C. Clarke, who was thinking fifty years ago about a distant future in which machines capable of "printing" any object out of the elements in the air would create an infinite supply of material goods:

> *At first sight, it might seem that nothing could be of any real value in this utopia of infinite riches—this world beyond the wildest dreams of Aladdin. This is a superficial reaction, such as might be expected from a tenth century monk if you told him that one day every man could possess all the books he could possibly read. The invention of the printing press has not made books less valuable, or appreciated, because they are now among the commonest instead of the rarest objects. Nor has music lost its charms, now that any amount can be obtained at the turn of a switch…. So we may hope, therefore, that one day our age of roaring factories and bulging warehouses will pass away, as the spinning wheel and the home loom and the butter churn passed before them. And then our descendants, no longer cluttered up with possessions, will remember what many of us have forgotten—that the only things in the world that really matter are such imponderables as beauty and wisdom, laughter and love.*[14]

Though this material utopia might seem as far off to us today as it did to Clarke half a century ago, its digital counterpart may be upon us.


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## APPENDIX: THE BEST OF THE REST

1. **BlaséWall:** Only allows access to content in which you're not interested.
2. **StayWall:** No waste allowed, all content on a page must be consumed before continuing on to the next.
3. **FlayWall:** The web stripped of its packaging.
4. **HermèsWall:** Brands your online presence.
5. **PureeWall:** Little bits of everything all mixed up and uniform. Aggregation without representation.
6. **BetrayWall:** Enforced balance by having to look at the opposite off what you want to look at (Washington Times if you navigate to the New York Times, Yanni when you search for Jay-Z).

[12] Jumblr, http://itp.nyu.edu/~ak2589/Softness/jumblr/

[13] The Kill Switch, http://chinaalbino.com/DWD/TheKillSwitch/

[14] Clarke, 161-2.

7. **HoorayWall:** Only one point of view is allowed.
8. **MichaelBayWall:** Anything that has been on the screen for ten minutes explodes.

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