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**Only its simplicity
 makes its difficult
 to understand**

Digital Deliverance is pleased that its Philosophy of New Media has become required reading in Stamford University's [Future of News in a Democracy course](#) and the University of Maine's [Computer Game Design course](#), and has been incorporated into Belgian artist Eric Van Hove's [Digital Golem](#) project, his entry in the UNESCO/

What is New Media?

To work successfully in New Media, you must understand what the New Media are.

There is a saying about Einstein's Theory of Relativity — that what makes it difficult for some people to comprehend is its simplicity. That you don't need to acquire more information to understand it, but that you must instead discard preconceived notions to understand it.

The New Media are a lot like that.

What generally stand in the way of people's understanding of New Media are the very terms *media* and *medium*. As commonly used, those terms are misnomers that block understanding.

Very few people understand the New Media simply because what most people think are *media* are actually *vehicles* within a medium.

- Magazines *aren't* media *nor* is a magazine a medium.
- Television *isn't* a medium *nor* is radio *nor* are television stations media.
- A personal computer connected to the Internet *isn't* a medium and the many computers that comprise the Internet *aren't* media.
- *Neither* is the World Wide Web a medium *nor* is e-mail a medium *nor* is the Internet itself a medium.

**Simply don't
 confuse a *Medium*
 with its *Vehicles***

Newspapers, magazines, television, radio, telephones, billboards, personal computers, the Internet, the World Wide Web, and e-mail all are *vehicles* for conveying information within a *medium* or *media*. They aren't the media or a medium in which they operate.

To understand the difference between a communications vehicle and a communications medium, you merely need to understand how the terms *medium*, *media*, and *vehicles* are correctly used when discussing transportation.

Indeed, you will then also understand that *only three communications media exist*, what those three are, and how to use them.

LAMAS 2003
International
New Media
contest entitled
[Digital Pluralism](#).
Van Hove will
submit the
project to the
5th World Forum
for Media Art
and Culture in
Ogaki, Japan, in
March 2004.

**The Analogy
Between
Communication
and Transportation
Media**

**A New
Transportation
Medium**

Here is the analogy between communications media and transportation media. Take a minute to read it.

Only three transportation media exist.

Land was the aboriginal transportation medium; it was the first transportation medium. Humans have walked on it since time immemorial. We still do. But we've also built vehicles to help convey us in this medium: carts, chariots, carriages, bicycles, trains, automobiles, trucks and lorries, etc.

Water is the second transportation medium. Its use as a transportation medium is almost as old as humanity's use of land, dating from whenever the first human attempted to ride a floating log or to swim across a stream, river, or lake. We've since created vehicles to convey use in this medium: rafts, canoes, barges, sailboats, ships, submarines, etc.

Before we list the third transportation medium, note some characteristics of these two transportation media, because you'll find that these characteristics have analogues in communication media:

Note first that humans' use of those two ancient transportation media predated technology. The vehicles that human technology created have merely extended our speed and carrying capacities in those media.

Also note that humanity's uses of these two media aren't necessarily dependent upon technology; most of us can walk and swim without any technology.

And note that each of the vehicles for these media are limited by its medium. Trains don't operate on water nor do steamships operate on land. Indeed, land and water have mutually exclusive transportation characteristics and reaches, mutually exclusive advantages and disadvantages.

A person who needing transportation had to pick one or the other of these media based upon where that medium reached or upon that medium's carrying capacity. For examples, water vehicles have almost global reach but not to landlocked cities. Land vehicles can deliver door-to-door, a capability that water vehicle can't provide. But many water vehicles have much greater carrying capacities than do land vehicles.

Land and Water. Throughout most of human history, people were limited to those two transportation media and those media's mutual advantages and disadvantages. *A third transportation medium was inconceivable.*

But in 1783 two French brothers named Montgolfier used their era's technology to vehicle that transported them into an entirely new medium. A hundred years later, Otto Lilenthal fabricated the technology of airfoils and began gliding over the German countryside, ponds, and lakes. And 20 years after that, two American brothers named Wright determined how to marry an engine to a glider. You probably know the rest.

Utilizing technology, these pioneers opened a third transportation medium that until then had been little more than a dream — the *Sky*.

Other vehicles developed for this new transportation medium are balloons, parachutes, gliders, airplanes, helicopters, and lately, spacecraft.

These are vehicles that can transport people anywhere on Earth. Though the transportation media of land and water have mutually exclusive reaches, this new transportation medium of the sky encompasses the reaches of both land and water, and generally without the complementary advantages and disadvantages of those two prior media.

But note that this new transportation medium of the sky is entirely dependent upon technology, unlike the two prior media. The sky isn't a natural medium for humans; people can walk and swim but we cannot fly.

OK. So, how does all this relate to an understanding of the communications medium popularly misnamed *New Media*?

Just as only three transportation media exist, only three communications media exist.

As with transportation media, two of those communication media are ancient and arose independent of technology. But the third medium is relatively new and its use is totally dependent upon technology:

Oddly, the first and earliest of these three communications media is only one not to have a commonly accepted name. So, we'll call this first medium the **Interpersonal Medium**.

This aboriginal medium arose in basic animal communications, predating both humans and technology. Human technology later extended its speed and reach. Interpersonal conversation is the basic form of this medium. The vehicles that human technology later built for it include the postal letter, telephone call, and electronic mail.

Just as the transportation media of land or water have some unique characteristics, so does this Interpersonal Medium of communications. It notably has two hallmarks:

Each participant has *equal and reciprocal control* of the content conveyed.

And the content can be *individualized* to each participant's unique needs and interests.

However, those hallmark advantages come with equal disadvantages:

The equal control and also the individualization of content *degrade into cacophony as the number of participants increases beyond two* (for example, try simultaneously holding different conversations with more than one person).

For those reasons, this Interpersonal Medium characteristically is used for communications between only

The First Communications Media Was Interpersonal

two people. And why many academics who study communications media term it the '*one-to-one*' medium.

**Mass Medium is
the Second of
Three
Communications
Media Extant**

The **Mass Medium** is the second communications medium.

Most people mistake the Mass Medium as a product of technology and don't realize how old it really is.

Like the Interpersonal Medium, the Mass Medium predates technology. It originated with the utterances and speeches of tribal leaders, kings, and priests. Technology has merely extended its speed and its reach to global dimensions.

Some vehicles in the Mass Medium are edicts, oratory, sermons, scriptures, plays, books, newspapers, billboards, magazines, cinema, radio, television, bulletin boards, and webcasting.

Communications in the Mass Medium generally go from a *one* person (for examples, a leader, a king, a priest, a publisher, or a broadcaster) to *many* people (the audience, readership, listenership, viewership). This also is why many academics who study communications media term it the '*one-to-many*' medium.

The hallmark characteristics of the Mass Medium are:

That the same content goes to all recipients.

And that the one who sends it has absolute control over that content.

The corresponding disadvantages of the Mass Medium are:

That its content cannot be individualized to each recipient's unique needs and interests and that the recipients have no real control over that content.

Like the Interpersonal Medium, the Mass Medium isn't necessarily dependent upon technology. For example, an actor or speaker can perform without any technology.

Before we list the third communications medium, let's note some contrasting characteristics of these two earlier communications media. Just as the transportation media of land and water have mutually exclusive characteristics, so do the Interpersonal Medium and the Mass Medium for communications:

**Two Mutually
Exclusive Media of
Communications**

**With Mutually
Exclusive Vehicles**

The **Interpersonal Medium** can deliver an individualized message but only to one person at a time.

The **Mass Medium** can simultaneously deliver messages to an infinite number of people but its messages cannot be individualized for each recipient.

The **Interpersonal Medium** allows each participant equal control over the content.

The **Mass Medium** allows control over the content by only one person.

Those mutually exclusive characteristics of the Interpersonal and Mass media have been important because anyone who

wants to individually communicate a unique message to each recipient has had to use the vehicles of Interpersonal Medium. And anyone who wants at once to communicate message to a mass of people has had to use the vehicles of the Mass Medium.

Just like using the sky as a transportation medium, for most of human history the possibility of any third communications medium existing had been inconceivable. Anyone needing to communicate had to choose between the mutually incompatible characteristics of the Interpersonal and the Mass media.

But, Just like how several technologies converged nearly a century ago to make the sky a transportation medium, the evolution of several ostensibly unrelated technologies converged during the past century to create a third and entirely new communications medium.

Among those convergent technologies were:

Development of a New Communications Medium

- The invention of digital communications during the late 1940s;
- The invention of the Transport Control/Internet Protocol ((TCP/IP) in the late 1960s;
- ARPANET's creation of the Internet during the early 1970s;
- The invention of the personal computer in the late 1970s

And to lesser degrees of the importance:

- The invention of the HyperText Transport Protocol (HTTP) in the late 1980s;
- The opening of the Internet to the public in 1992;
- The invention of the Mosaic browser software in that same year.

These and other technological innovations converged to create a new communications medium that has characteristics inconceivable even a decade ago.

The hallmark characteristics of this **New Medium** are:

That individualized messages can simultaneously be delivered to an infinite number of people.

And that each of the people involved shares reciprocal control over that content.

The New Medium

In other words, the New Medium has the advantages of *both* the Interpersonal and the Mass media, but *without* their complementary disadvantages.

- No longer must anyone who wants to individually communicate a unique message to each recipient have to be restricted to communicating with only one person at a time.
- No longer must anyone who wants at once to

communicate message to a mass of people be unable to individualized totally the content of that message for each recipient.

Note that the New Medium for communications, like the transportation medium of the sky, is entirely *dependent* upon technology, unlike the two preceding communications media. Like humans flying with technology, this form of communications can't be done with technology.

Because the New Medium simultaneously encompasses both the characteristics and the reach of the two previous communication media and therefore can easily perform each of those media's individual tasks, many people mistake the New Medium as merely an electronic extension of the Interpersonal or Mass media.

Most people mistake it as a paperless or antenna-less form of the Mass Medium (a mistake somewhat like seeing aviation only from the perspective of the ground.)

Moreover, many marketing consultants often mistakenly refer to it as a 'one-to-one' medium.

But the academic and the consultants who truly understand this New Medium and its possibilities to simultaneously deliver an infinite number of individualized messages while providing equal control over that content refer to the New Medium as the '*many-to-many*' medium — to distinguish it from the 'one-to-one' (Interpersonal) or 'one-to-many' (Mass) media.

Mistakes, misnomers, and misperceptions of the New Medium are easy to make because the vehicles of this New Medium are only starting to appear, as are the true capabilities of this New Medium.

What are this New Medium's capabilities?

Just consider the converged technologies that make this New Medium possible.

For instance, the millions of computers interconnected through the Internet can acquire, sort, package, and transmit information in as many ways as there are individual people. They can establish those communications simultaneously. And they allow each participant (senders and receivers) to share equal simultaneous control.

This can result in unprecedented forms of communications.

Imagine that when a person visits a newspaper Web site, he sees not just the bulletins and major stories that he wouldn't have known to request information about but sees the rest of that edition customized to his own unique needs and interests. Rather than every reader seeing the same edition, each reader sees an edition that has simultaneously been individualized to his interest and generalized to his needs.

Or imagine that each viewer who is simultaneously watching a broadcast can stop, rewind, or fast forward the program at will, or even change the denouement of the program's plot.

Realize that these New Medium forms of content inherently are forms of mass customization, something impossible with either the Interpersonal Medium or the Mass Medium.

Misnomers & Mistaken Impressions

Its Capabilities

The existence of this New Medium will catalyze, economize, and popularize entirely new vehicles for production and distribution, just as the invention of the medium of air did for transportation.

And it will create entirely new concepts in and forms of content.

What are some of this New Medium's early vehicles?

Its Early Vehicles

- The personalized web site is one (*personalized* actually is another misnomer; *individualized* is a more accurate term).
- Some computer games, such as *Myst*, are New Medium vehicles.
- Napster is a New Medium vehicle.
- (But note that the *Internet is not by itself a New Medium vehicle* — *no more so than a road can be a land vehicle.*)

Other New Medium vehicles are only now being developed as entrepreneurs and companies realize this medium's possibilities.

The New Medium itself is merely a manifestation of a *larger, revolutionary historical change underway* that transcends just issues of communications.

Analysts and pundits talk about this larger change as an **Informational Revolution** that is superceding the world of the Industrial Revolution in much in the same way that the *Industrial Revolution* itself superceded the *Agrarian Revolution*.

But the terms Informational, Industrial, and Agrarian merely refer to characteristic products of these phases in the evolution of human society. Not to the natures of these revolutions themselves.

But It's All Part of a Superset of Change Underway

During the *Agrarian* world, which began about 5,000 to 10,000 years ago, a person who needed clothing had to make his clothing himself. Or another person made his clothing individually for him. Only one piece of clothing would be made at a time and each piece of clothing would be individualized to his own individual size and needs.

Then some 200 years ago, mechanical technology evolved to the point where factories could be created, and the *Industrial Revolution* began. In the Industrial world, millions of pieces of clothing could be produced, but none could be individualized to the exact measurements of its ultimate consumer.

Note how these complementary advantages and disadvantages of products from the Agrarian and Industrial ages are similar to the complementary advantages and disadvantages of the Interpersonal Medium and the Mass Medium.

This is because most of what we nowadays perceive to be the Interpersonal Medium dates from the Agrarian Revolution and most of what we nowadays perceive to be the Mass Medium dates from the Industrial Revolution.

Now, new advancements have created technologies that unite

the advantages of both Agrarian individualized production and Industrial mass production, with none of the complementary disadvantages.

For example, companies using these new technologies, such as Levis Strauss & Co., have begun to *mass-produce* jeans that are *individualized* to each user's exact specifications.

This is similar to how the New Medium can send instantly individualized messages to mass recipients. Both the New Medium and Levis Strauss & Co.'s abilities to mass produce individualized jeans are manifestations of the Informational Revolution.

The Informational Revolution's effects upon society are being compared to those from the invention and promulgation of printing presses.

However, the actual significance of the Informational Revolution is greater: The invention of the printing press was *merely a technological amplification of the Mass Medium*.

By contrast, this New Medium indeed is an entirely new medium; a quantum leap beyond mere innovations such as the printing press.

Returning to our analogy between transportation and communications media, the development of the air as transportation medium didn't entirely replace land or sea transportation. Neither will the development of this new communication medium entirely replace the Interpersonal or the Mass media.

However, it will certainly and markedly reduce and limit those previous media, much as the invention of aviation did to land and sea transportation.

So, if you don't now understand what the New Medium is and how it differs from traditional media, please [let us know](#).

© Vin Crosbie, 1998 (revised to include world usage figures and Napster example, 2002)
