

How Can I Put That? Applying Cybernetics to “Conversational Media”

Paul Pangaro,¹ Ph.D.

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Abstract

For those engaged in the discipline of cybernetics, its relationship to business has long been discussed and desired. The recent explosion of digital communication channels affords an application domain for cybernetics that is itself potentially highly productive yet clearly in need of guidance. While “Web 2.0” experiments abound, failure rather than design has been the primary mechanism for steering the development of marketplace conversations between and among brands and consumers. This paper proposes to replace natural selection with the application of conversation theory to marketing as a means of improving outcomes.

Using cybernetics concepts of goal-directed systems, requisite variety, co-evolution and conversation, the author characterizes marketing conversations, offers examples of them, and provides prescriptions for improving them. The goal is to improve the conversational experiences delivered by digital technologies in order to better meet the goals of marketers and, especially, the goals of users/consumers/persons who are on the receiving end—and, more so every day, on the generating end—of interaction channels enabled by digital technology.

In practice, conversation is a requirement for commerce because any commerce transaction must be preceded by agreement, which must be preceded by conversation. Therefore, the quality, efficiency, and effectiveness of conversation should be a focus for every business that offers products or services. Furthermore, conversation is a requirement for brands and consumers to create a relationship of trust, which is the foundation of lifetime customer value, which in turn is the single best measure of viability—the survival and thriving—of any brand.

Keywords: cybernetics, conversation, Web 2.0, media, marketing, design

¹ CyberneticLifestyles.com, 200 West 58th Street #5B, New York, NY 10019 USA, pan@pangaro.com.

Preface

Colleagues from the world of marketing and advertising had been looking over my shoulder as I apply my background in cybernetics of conversation [Pangaro 1987] to create frameworks for enhancing the processes product design and organizational design. [Pangaro 2008] They suggested there would be payoff in applying my frameworks to marketing. Taking their advice, I have since been engaged by a large IT systems company, a large financial institution, a major conference on digital marketing and a global advertising agency, all in projects that apply conversational frames to marketing relationships. By generalizing that work to the domain of conversational media, I will show how a study of conversation leads to pragmatic and immediate improvements to techniques of digital marketing, to the benefit of consumers and brands alike.²

The goal of the effort is not to improve the ability of marketers to unfairly push—to interrupt without permission or to untruthfully present—what they wish to sell. Quite the opposite: a primary point of this paper is to show that marketing interactions that converge on conversation—true exchanges among relative peers in which either side may freely opt-out, learn, contribute to the learning of the other, or agree whether or not to collaborate or transact—diminish the opportunities for either side to take advantage or unfairly treat the other.

The paper uses core concepts of cybernetics as a means to model goals of conversational media. It reviews the essential components and qualities of "effective conversation", defined as exchanges in language that lead to learning, cooperation, and/or collaboration. In the case of marketing conversations, this begins with brands learning about consumer preferences and "turn-offs", and consumers learning about what products and services are available. Both sides may choose to cooperate in continuing the conversation via specific channels and with specific intentions. They may also agree to collaborate on designing new products and services, usually in the form of feedback via (old-school) consumer surveys and focus groups, or the explicit invitation by brands for consumers to offer suggestions for new offerings via online (web 2.0) contributions, which may be text, images, video, or a combination.

The goal of the paper is to clarify the nature, benefits, and requirements for effective conversation, as a prescription for better outcomes in marketing conversations. As a result of a conversational approach, organizations may greatly improve the focus (and therefore lower the cost and increase the effectiveness) of their design and feedback processes, resulting in better return-on-investment as well as greater lifetime customer value and, therefore, business viability. Participants in conversations lower the effort required to collaborate, increase the trust in their relationships (where warranted), and achieve greater satisfaction in the relationships enabled through conversation.

² For the purpose of this exposition, the term *brands* will be used in the same sense as industry parlance, to refer to an organization that has influenced a mental model of its value and offerings in an individual's mind, which serves as a short-cut for evoking an immediate assessment of the potential benefit and trustworthiness of an initiated or anticipated interaction. While, ultimately, individuals create the messages that get conveyed by whatever means, and individuals interpret them, it makes a useful shorthand to refer to "brands" and "consumers" while acknowledging that these "constructed entities" exist for the convenience of exposition. This shorthand must not muddy the ethical issues that arise from the study of conversation or the study of marketing; as stated in this section and elsewhere in the paper, it is the conviction that the application of conversational models to marketing leads to better outcomes for individuals that is a core motivation for the work.

Context

All marketing today is digital marketing, because no aspect of marketing is untouched by digital technology. It is easy to see how email, web site banner ads, search engine advertising, and mobile services are core channels of digital marketing; but since all large-scale publishing uses computer systems to manage data about and relationships with customers, no media is untouched by “digital”.

In this context, the phrase "conversational media" has been in widespread use at least since 2007, and is frequently attached to conferences, consultancies, and industry practices. On examination, however, the industry's focus is overwhelmingly on the "media" component and the benefits of the efficiencies of digital technology for marketers.

In contrast, this paper emphasizes the "conversational" component. It examines the benefits that may accrue to consumers as a result of the nearly-costless consumer-to-consumer conversations afforded by digital technology, as well as the benefits of better conversations with the brands who produce the products and services that consumers need and use.

Internet-based software services in the realm of "social media" are relatively recent. The rise of Facebook (founded in 2004), Web logs a.k.a. “blogs” (exponential growth from their rise in 2003), and “wikis” (exponential growth around founding of Wikipedia in 2001) are all hallmarks of internet interaction where users are participants and generators of content, as well as consumers of it.

Conversational marketing in a general sense has been around, well, since the dawn of commerce (think of the haggling over price that occurs in every bazaar since they arose in the 4th century; the etymology of the word “bazaar” comes from “place of prices”). If we narrow our view to the digital media explosion, the rise of Internet led to the infusion of the meme that “markets are conversations” in Cluetrain Manifesto, published in 2000. [Levine, Locke, Searls & Weinberger 2000]

A common understanding of the phrase “conversational marketing”, which came into common parlance in 2007, is “relationship marketing meets social media.” Pure selling has a focus on an immediate transaction, while relationship marketing focuses on customer retention and satisfaction—a longer-term relationship, with different actions required for success (and, as we will see, different sensing and different goals as well). “Social media” may appear to refer to channels that afford rich social interaction; however, the term refers simply to the ease with which today's technology users can access, create, and publish content a rich set of media formats (text but also audio and video). A related term, “social networks”, refers to internet services that provide frameworks within which such content may be easily shared; Facebook is the most famous example of this but other frameworks, recently including Twitter, continue to arise.

Inside the marketing industry, there are many instructive tales—instructive to brands, that is, about what they should and should not do—where user-generated content (UGC) has had huge impact on the brand and at little or cost to users. Conversational marketing, then, could be viewed as the cynical acknowledgment by brands that they had better pay attention to UGC. This could extend to brands expending effort to "host" conversations that allow consumers to connect, in a location where brands can watch and react to them (sensing, comparing to desired

state, and acting to course-correct). While they cannot control these conversations or even dominate them—the sheer number of customers actively commenting will always be greater than the number of the brand’s employees responsible for participating in the conversation—to discount them or ignore them is perilous and sometimes disastrous.

Premise

The premise of this paper is: by focusing on the requirements for effective conversation—that is, by explicitly "designing for conversation"—designers of web services can create a high-value, efficient, and effective experience that improves the relationship of consumers to brands as well as between consumers and consumers, which is also highly beneficial to the brand. It may be surprising to add the further prediction that, as a result of designing for conversation in the highly transparent and frictionless World Wide Web, the ability for brands to deceive the public decreases, and therefore the long-term benefit of a brand's ability to converse better can only benefit consumers and will not place them at a net disadvantage.

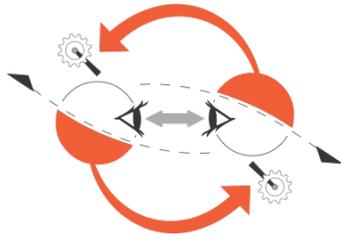
Approach

My approach to "designing for conversation" is rooted in cybernetics, a science of steering. Cybernetics affords a framework in which to consider the goals, course sensing, control levers, and course correction that is possible in the relationship of any system to its environment. Because it encompasses domains of the individual, social, and technical, it provides a useful tool for understanding digital marketing. The specialization of cybernetics in its application to conversation, as manifested in conversation theory [Pask 1976] offers further, highly-specific, and useful models.

Equally important to understanding systems of any kind is the concept of requisite variety. Developed by W. Ross Ashby [Ashby 1956] in a powerful and rigorous form to apply to any system, requisite variety can be extended to apply to social systems, that is, systems in which language defines the essential variables that determine viability of the system. [Geoghegan and Pangaro 2009] The issue for mechanical, biological, or social systems alike is that a system’s capacity to achieve its goal is a matter of the internal variety of the system, that is, the range of possible responses in the face of sensed changes in the environment. In the case of social systems, conversation is the means by which this variety is expressed and where it emerges, because it is unlikely (or, more likely, impossible) that a single participant possesses requisite variety. Therefore, conversation is a requirement for a social system to achieve variety sufficient to reach its goals in all but simple situations.

Conversation can be highly analogous to steering a ship: it can have a goal, interactions, a sensing of “error”, acting again, and so on. Of course the goal may not be fixed, and true conversation allows each participant equal “say”, as follows.

Figure 3 represents such a cybernetic loop of conversation, where two participants are interacting in conversation, “seeing eye-to-eye” on (at least some) goals and understandings, but also wanting to influence the other, to control the other’s “levers”.



Caption Figure 3. The conversational interaction between two participants, each sensing and acting in the context of the other. ³

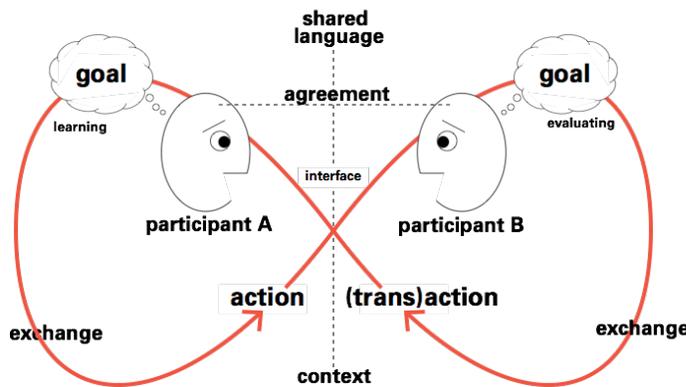
But in contrast to the control loops involved in steering a physical system—such as a ship, where the captain literally controls the levers of the rudder to influence direction—interactions in conversation do not afford this form of direct intervention. The looping of conversation does not afford the opportunity for “control” or even “regulation” of one participation by the other. [Pask 1975] An utterance may have an effect; but this occurs with participation of the receiver, whose belief structure is triggered by the utterance, causing some reaction (more about this below).

But participants in conversation *can* be influenced in their behaviors and beliefs, so “levers” of some kind are available. We have to say more about this in order to subsequently characterize the influences of marketing conversations.

Skeleton of Conversation

Here we characterize the basic skeleton of conversational interaction.⁴

Figure 4 is a diagram of the fundamentals of conversation.



Caption Figure 4: Skeleton of conversation, used to characterize five basic elements.⁵

³ Icon adopted from *L'Ère Atomique, Cybernétique, Electronique, Automation*. Éditions René Kister, Geneva, 1958.

⁴ Needless to say, conversation is highly variable, complex, unreliable, and subject to a broad range of cognitive and emotional misunderstandings (not to mention intentional manipulations). For our purposes here, five basic elements of conversation will be characterized as if they can have clear boundaries, while recognizing this is an ideal description. Despite this simplification, the model affords highly-useful insights about marketing conversations, and ultimately suggests a number of paths to improve them, see below.

I. Context. A conversation begins with a participant, let us call her "A", who has a goal. She begins by choosing a context in which to initiate contact. Now, the phrase *context for conversation* has two important senses:

1. the moment of contact—what each participant is currently doing and the context in which they "sit" at that moment: time, place, current activity, interests, etc.
2. the history of contact—the prior exchanges, relationship, agreements, and history in which the participants "sit" as a result of shared history. (Of course, there may be no shared history whatever, as when a salesperson makes a "cold call". But, even in this case, a history quickly builds, and criteria for judgments outlined below are therefore quickly available, even if relatively thin and less reliable.)

II. Language. When participant A initiates contact, she sends a message in a language that may be verbal, aural, visual, gestural (which itself could be visual or haptic), or some combination. For this to make sense, participant B must be able to interpret (at least something about) the message. In this sense, the language used must be (at least to some extent) shared language. There is no guarantee the message will be interpreted by the receiver in the manner and meaning intended by the sender. But the "more shared" the language is, as well as the more complete and unambiguous the message, and the more cooperative the receiver, the more likely understanding will occur.

III. Exchange. Participant B receives the message, which becomes a trigger for interpreting and deciding whether to continue engaging. He likely has some reaction: curiosity, wonder, fascination, approval, assent, or even revulsion. Perhaps this reaction is enough for B to invest in a response and engaging further. If B finds a reason to stay in the conversation, he responds and an exchange begins.

In turn, B's response could evoke a reaction in A, causing further response, and the exchange continues. Either participant may choose to leave the exchange at any time.

IV. Agreement. An agreement may follow, that is, a shared understanding about a particular topic.⁶ This may be an agreement about information or an occurrence or conjecture. It may be a promise to coordinate actions or collaborate to create new goals together in future.

V. Action/Transaction. Finally—in the sense of culmination of outcome but not in the sense of "end of conversation"—actions that are outside of actions associated purely with the conversation may be taken, as per agreements made. Some actions are those of commerce, that is, a transaction that involves an exchange of money for product/service. Other actions may be engaging in a game, meeting or performing some other coordinated behaviors, etc.

⁵ Figure after Dubberly Design Office, San Francisco, California.

⁶ This invokes Pask's "agreement over an understanding", which in turn invites the application of his approach to training and individual learning styles as an extension of this paper.

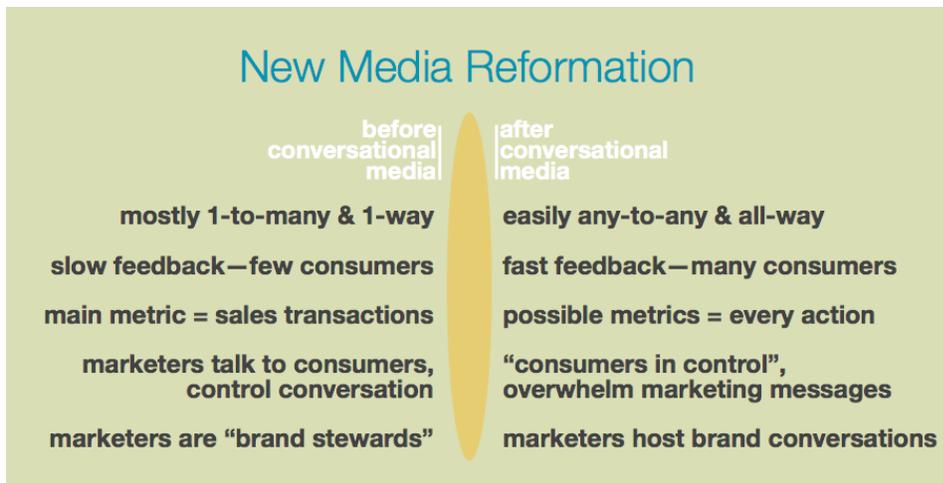
So what? Why is conversation important to commerce?

Of course, brands are interested in selling; they want consumers to buy in order to produce revenue and, ultimately, profits. But to do so, consumers need to believe that buying will get them what they want. Convincing consumers to buy means influencing what they believe. Conversation is the most effective means to influence beliefs. (You could try hypnotism, but that doesn't scale to large numbers of people, and its influence fades quickly if it works at all.)

These fundamental connections between conversation and commerce do not change—even as technology and marketing evolves.

How has marketing evolved?

A complete review of the evolution of marketing is beyond scope here, but suffice it to say that a lot changed when the digital revolution brought inexpensive hardware and software (computing and communication infrastructure), Internet (digital transport layer with simple technical protocols), the world wide web (conventions for exchange that lowered the cost of creating channels as well as participating), and the browser (simple interface that anyone could learn to use, easy to “program” with content). Before all this, brands controlled all of the cost-effective channels of distribution (print, broadcast radio and television, outdoor billboards/public spaces).



Caption Figure 5: Characterization of the change in conversations between brands and consumers, before and after the “reformation” in which digital media allowed direct connections between and among brands and consumers.

As shown in Figure 5, the advent of digital media created a “new media reformation”—no longer needing a priesthood to “speak to God”, users/consumers anywhere could express themselves and make it accessible to anyone else, to brands or other consumers alike. By making comments on blogs, changing wiki pages, or uploading their text or video media to a web site, users became “social-media enabled”. By 2005, this reformation had taken hold and shows no sign of topping out.

Examples

There are many examples of UGC changing the conversation, even radically, and to the detriment of brands that were behaving badly. One of the first was a bike lock manufacturer who ignored warnings that the simple insertion of a common ball-point pen casing could open the lock. As a result of the brand's continued inaction to change the product (or even to admit there was a problem), a consumer uploaded a video that proved the lock could be opened by this method in a few seconds. The brand had to respond quickly thereafter, but its image was severely tarnished. Another episode relates to a manufacturer of light trucks, whose explicit invitation was to consumers to create and upload videos of their own advertisements for the truck. Famously, thousands of consumers responded negatively, many uploading videos that indicted the truck for being environmentally damaging; for example, one text title overlaid on images of the truck was "Our Planet's Oil is Almost Gone. You Don't Need GPS to See Where This Road Leads". [Karlaluoto 2008]

The lesson here is that *conversations will occur*, especially when consumers are brought to action by a brand's bad products or lack of responsiveness.

Requirement/Opportunity

Clearly—and the marketing industry understands this and has responded in recognition—the industry is not in charge of the conversation. This is a massive change from before the reformation, when the messages were essentially 99% one-way, from brand to consumer. The opportunity for the brand is to (a) join conversations that consumers will have anyway; (b) understand what they mean—what consumers believe, and how to “correct” that belief; and (c) in general, facilitate productive conversations that can convey the meanings and intentions of the brand. All this would be in service to close-coupling to consumers, the life-blood of the brand's success. By such coupling, it becomes possible to co-evolve—or, at least, if a conversational relationship is established, the brand can sense, compare to goals, act, and also *change goals to evolve the product/service* in synch with market evolution.

Of course, just having the conversation is not sufficient; there must be internal processes, as well as second-order checks on those processes, to ensure they are being carried out effectively:

- **listening** carefully to the sensed inputs
- **comparing** those inputs to goals
- determining appropriate actions for **responding**, to keep on course and converging on goals
- to continue **sensing consequences of actions**, at this level, while at the same time...
- **maintaining a second-order viewpoint** to ensure that the *listening itself* is capable of sensing changes in the environment.

This last point cannot be overemphasized. Other work [Geoghegan, Dubberly, Edmond & Pangaro 2002] has explained causes behind the failure of organizations that initially achieve great success, only to be so absorbed in their current language as to be unable to sense changes in the environment. This is not about a capacity to see change while ignoring it; rather, it means the organization does not possess the sensors—needed distinctions and concepts comprising a worldview that can be expressed in organizational language that can be shared—to see that the environment has evolved.

If the organization possesses sufficient language and if the language is used to sense external changes and create new strategies that are carried out through plans and actions, *then* the organization may survive. Further, if this process is vigilant and consistent, the organization can change in synch with changes in the environment. On a practical level, this is only possible when conversation enables the organization to track where the environment—the market and consumers—are going. This same conversation can be used to inform and influence the market and consumers about what is possible. If the conversation is effective, then co-evolution of the business and the market is possible, and thereby, the viability of the business can be achieved. Co-evolution is a highly demanding and disciplined process, but it is the closest thing to a guarantee of success.

Prescriptions

Given the model of 5 elements of effective conversation from the earlier section, how can conversations be improved? In this section we review each element and point out where attention must be paid.⁷

I. Context

As presented above, there are two interpretations of context.

1. What is the right moment to open an exchange? The consumer *must* be receptive to *some* extent, and there is always a risk to offend and thereby lose trust and possible future engagements. When and where is it “reasonable” to send a probe, to request attention?

Digital media is a two-edged sword in this regard: it offers many more possible channels and touchpoints, and therefore it multiplies the opportunities to begin a conversation. But it also places everyone in a swarm of interruptions, calls for attention and multi-tasking all day long. As a result, there is far greater danger in initiating a conversational exchange that annoys, and thus negating the potential value for the receiver, leading to termination of the exchange.

In addition to a general sensitivity to the issue of interruption, digital media will become increasingly “context-aware”, that is, it will be possible to estimate where the consumer is, what she is engaged in, and even (based on history) how likely she is to respond.

2. What is this “moment in the market” The consumer must already need or want or desire something, or quickly learn to do so. What needs are unfulfilled?

Again, it is becoming increasingly possible to understand the current state of a consumer’s need and interest, and to choose a better offer. The more that is understood about the consumer’s history—prior purchases, profiles of demographics and psychology—the more accurate the offer can be,

In both cases there is substantial efficiency in utilizing the various digital channels as well as the “addressability” of digital media—the ability to address a specific individual in a known and

⁷ These elements are excerpted from conversation theory and Pask’s writings about the requirements for “strict conversation”. [Pask 1976]. Pask was interested in the measurement of hard-valued conversational events. Here we can be less stringent and highlight the elements that afford a scaffolding for understanding and improving marketing conversations without the same concern for rigor.

specific context. This means that the recipient will be more receptive; the likelihood of the exchange continuing is greater. At the same time, the explosion of contexts created by digital media requires consideration in choosing, and a dissection of conversational intent as well as content, in order to decide the best situation or means in which to make the interruption:

- email
- search engine results
- web page banners, contextual ads next to email and other user content
- social network sites
- "micro-blogging" channels such as twitter
- mobile phones, geo-location, context-sensing

For example, local shops now invite their customers to subscribe to their "twitter feeds" in order to learn about specials from shops in their neighborhood. Once the subscription is accepted, the network then spews out announcements that *should* be acceptable to customers because they explicitly requested the communication. The logical extreme of this was expressed in the movie *MINORITY REPORT*, where simply walking down the street causes projections of advertisements and specific offers, created for this individual consumer, right now.

To point out another complication, traditional media are "going digital"—a television show or even an outdoor billboard may invite texting from a mobile phone to cast votes for an outcome.

II. Shared Language

The language chosen defines what can be "talked about". Nearly every conversation must start in a vocabulary with concepts that resonate with the receiver—otherwise it will seem to be nonsense (a.k.a. "noise"). As it proceeds the conversation must "tune in to" consumer need-states, wants, and desires, "speaking" in the customer's terms. Inevitably this creates a "language system" or a framing or a worldview that encourages a way of thinking for the consumer to adopt—and, upon adoption, encourages the consumer to engage more with the brand. At best for the brand, the inexorable conclusion of the new belief is that the consumer commits to a transaction for a product/service that will, in practice, satisfy the consumer's need or want.

While every marketing communication and advertisement creates a language system, some are more striking or effective than others. One exceptionally effective example is that of a chewing gum brand that put a clever twist on the meanings of common phrases that have changed as a result of conversational media itself. Figure 6 shows one of a series of ads playing on that theme. While "instant message" commonly refers to a service whereby text messages can be exchanged between mobile devices, Dentyne Gum used it to express basic and ago-old physical connections between human beings.

This ad—one interaction in an on-going conversation between brand and consumer—simultaneously surprises the viewer with the new interpretation of the old theme *and* conveys the brand benefit that *using this product will make you more comfortable when physically close to someone because it freshens your breath*. The result creates "engagement"—the receiver is drawn in and stimulated by discovering the language system. This alone delivers value to the receiver, because it is creative and clever.



Caption Figure 6 shows an advertisement in a campaign, where ads create a “language system” that communicate the benefit of the product as well as stimulate engagement with the consumer via its cleverness and rich point-of-view.

III. Exchange

We primarily think of conversation as the element of exchange, the back-and-forth interactions that comprise the heart of the value of conversation. While the term "interactive" is so often used in reference to using computers, interacting with software seldom has the richness of conversational exchange. [Dubberly, Haque & Pangaro 2009] It is also important that, through conversation, beliefs may be validated or changed.

That last point is critical. Conversation is the means by which we learn. Learning is a change in belief. Changing our beliefs requires conversation. It may be a friend giving advice, or a brand conveying concepts in hopes of creating and/or keeping a customer. On the other hand conversation is essential for the customer to question and test understanding. In the absence of a human salesperson and before digital media, the marketing relationship was always "broadcast" (one to many) and one-way. This meant that the conversation was internal to the consumer:

Me/Perspective A: "Would this product give me the features I need?"

Me/Perspective B: "Well, it's quite expensive so it better do."

Me/Perspective A: "OK, right, cost is an issue, but what about while I'm traveling on business and my needs are strict, will it work effectively for me then?"

And so on. With digital media this can be an actual brand-and-consumer conversation, with “give-and-take”. However, conversational exchange must involve listening and allow questioning and offering, for which "interactive software" on its own is seldom capable. The exchange must offer some value for the participants to agree to continue; otherwise, it may be broken off at anytime by either side. But by investing in continuing, participants may find that the exchanges are useful. For example, a consumer may learn what is possible from a brand's product/service, or the advantages of a relationship with the brand. In any case, the consumer builds a model of

the trustworthiness of the brand from these exchanges. Conversely, the brand may learn what consumers think, feel, and want, and in many dimensions—in products/services it may or does offer, in a relationship, in conversing, etc. A relationship may form; trust may be built.

Trust is one of the most valuable outcomes of conversation, in a literal, though non-monetary, sense of “value”. Trust reduces risk—that the conversation will be a waste of time, or that a subsequent agreement will be rescinded. Knowing that a relationship *is not* trustworthy is itself extremely valuable because it reduces personal investment that is unwarranted. Thus, trust is a primary means of lowering the bio-cost⁸ of later interactions as well as the foundation of a long-term relationship. At an ideal extreme, the on-going conversation can move beyond trust and create mutual esteem, the most enduring relationship of all, because it is robust and takes more negative interactions to reverse positive expectations.

Apple Retail Store. Come to shop. Return to learn.



Caption Figure 7: Apple’s understanding of the value of the conversation with consumers is explicit in the relationship it creates between customers and the “Geniuses” at the Genius Bar.

Figure 7 shows a web banner ad for the “Genius Bar” in the Apple retail stores, an outstanding example that achieves all the above, affording opportunities for each side to learn about the other. The transactional basis of the relationship, as well as the value of continuing the conversation, is captured in Apple’s own caption, “Come to shop. Return to learn.”

IV. Agreement

A benefit of conversation and often an explicit goal, agreements arise when both sides in a conversation share an understanding. [Pask 1976]

An agreement with a brand that is created via digital media could be: registering on a site (agreeing to receive email notifications); entering a credit card for a purchase (agreement to transact); or declaring general preferences for types of meals and seats on an aircraft (agreement to return). A profound example of agreement-enabling via digital media was the recent US presidential campaign of Barack Obama, where digital media in many forms—email, twitter, Facebook, even software applications for the iPhone—cemented a connection and allowed coordination of political beliefs and campaign actions across a constituency that stretched across a nation.

⁸ In contrast to the measure of monetary cost, “bio-cost” is a coinage that refers to the “biological cost”—the energy, time, attention, and stress—required to achieve a human goal. See Dubberly, Maupin and Pangaro 2010.

V. Actions or Transactions

Given agreement, coordinated actions may follow (relatively) predictably. One future action may be to continue a real-time conversation at a later time that is specific or to-be-determined. This agreement may exist between two individuals or across a team or within a social community. It may occur in future face-to-face engagements or once again in a "virtual" sense, mediated by digital technology. (Speaking rigorously, the conversation likely continues no matter what agreements are made or actions planned in the future, because each participant can continue to hold internal conversations as if with another, or even with oneself as a consequence of prior external conversation with others.)

As already noted, a critical component of relationships with brands is that of *transaction*, that is, engaging in actions that trade a product/service for compensation (monetary or otherwise). A brilliant synthesis of relationship, community, and action/transaction is the web site of Nike+ ("Nike-plus"). The site serves runners who have purchased a device that fits in their shoe and sends wireless data to an iPod carried by the runner. The iPod records speed and distance travelled, while offering the usual opportunity to play audio during the run. On returning home and docking the iPod, the runner automatically transfers this data to the Nike+ web site, performance can be compared with the runner's own prior runs *as well as* with a community of similar users, friends and strangers alike. As a result, the runner is integrated into a community with common interests and uses those relationships to increase commitment to maintaining or improving performance while stimulating others to do the same. One result is a blurring of the community of peers and the brand itself. This leads to long-term trust, return of the consumer to use the products and services offered by the brand, and, ultimately, an emotional affiliation and identification with the brand that can weather product defects and competition far better than one-way messages about benefits.

Infrastructure of Commerce

Given the core role of conversation in enabling agreements, (trans)actions, and trust, the logical conclusion is that conversation is the *infrastructure of commerce*. At minimum this is true because conversation is a necessary precursor to transaction. However, long-time business viability is not built on solitary transactions; it is built upon continued transactions from existing customers. Conversation may lead to a continuing relationship, which creates history, which builds trust. History and trust are necessary precursors to securing today's customer as tomorrow's customer. The importance of this idea is reflected in the term *lifetime customer value*, an important concept in marketing and a measure of the future success of a business.

Lifetime customer value (LCV)⁹ is the present value of the future cash flows that can be projected from the quality of the customer relationship today. LCV is a critical measure of the viability of a business, because it projects future income. LCV is more important than today's revenue in part because the cost of acquiring a new customer—via a conversation that leads to transaction—must be recouped. This can occur either in the first transaction or over multiple transactions. In any event, once the investment in that first acquisition is made, *subsequent* interactions can be more efficient—that is, cost less for the brand—because of the established expectations of the consumer. If trust has been established, and the brand continues to offer

⁹ The following Wikipedia entry offers an excellent review of the concept:
http://en.wikipedia.org/wiki/Customer_lifetime_value, downloaded 18 June 2009.

(genuine) value to the consumer, each subsequent transaction yields revenue without the cost of customer acquisition *as well as* because of pure revenue.

Because the numerical measure of LCV (again, the lifetime revenue potential of a given customer) is higher when the quality of conversation is higher, to invest in conversation is to invest in revenue. Thus, designing for conversation contributes to the revenue and the viability of a brand.

The appendix offers a prescription for applying the conversation frame to the design of conversational media. With few changes it also applies to interaction design [Dubberly & Pangaro 2009] whether in the form of software or face-to-face services.

Summary

The importance of conversation to commerce has been demonstrated by showing the deep requirement of effective conversation in the relationship between brands and consumers in today's digitally-mediated marketplace conversations. In particular, conversation is a necessary precursor to agreement, which is a necessary precursor to transaction—that is, purchase and revenue-generation for the brand. However, unless the brand is offering genuine value, the ability for consumers to hold their own conversations, with or without the support of the brand itself, can lead to erosion of trust and severe detriment to both the brand's image and its revenue. Conversation is also a necessary precursor to building a history and trust between brand and consumer, which has direct impact on lifetime customer value, which in turns is an important measure of a brand's viability.

In the broadest context, conversation is a structure in which human collaboration and cooperation is enabled. The capacity of a conversation—literally, its variety—determines what can then occur.

In sum, we can only achieve what we can talk about.

Conversation is inevitable—without conversation, we are not human. Paying attention to conversation is an investment in possibilities. The alternative is worse, and unnecessary.

Appendix—Prescription for Designing for Conversation

1. Invest in understanding conversation
 - a. evaluate prior campaigns in terms of conversation
 - i. for each element of context/language/exchange/agreement/transaction, how could the conversations have been improved?
 - b. look at each technology in terms of conversation
 - i. what does a given technology do better?
 - ii. less well?
 - c. think in terms of conversation when developing new campaigns
 - i. what is the goal?
 - ii. what is the best technology for each aspect of the conversation?
 - d. can we design directly to increase trust?Appendix
2. Track trends, tools, and technologies that will change marketing conversations in the next 5 years
 - a. beyond social networks
 - b. beyond mobility
 - c. context-awareness
3. Design for conversation explicitly
 - a. embrace every consumer as a participant
 - b. define specific goals for each exchange
 - i. for the brand
 - ii. for the consumer
 - c. work such that conversation leads design
 - i. context...
 - ii. language...
 - iii. exchange...
 - iv. agreement...
 - v. transaction...
4. prototype the conversations you want
 - a. model the interactions within conversations, not information architecture or content design inside of web sites or marketing campaigns
 - b. instill continuous sensing and testing as a process for
 - i. understanding the market
 - ii. defining and delivering the offering
 - iii. increasing customer satisfaction

Remember that productive conversation is iterative.
It requires trial-and-error. It gets more efficient over time.

References

- Ashby, W. Ross (1956). *Introduction to Cybernetics*. Chapman and Hall. Available for download at <http://pespmc1.vub.ac.be/books/IntroCyb.pdf>.
- Dubberly, H., Haque, U., and Pangaro, P. (2009). "What is Interaction? Are There Different Types?", in *Interactions Magazine*, publication of the ACM, Volume XVI.1, January / February '09. Available for download at <http://www.dubberly.com/articles/what-is-interaction.html>.
- Dubberly, H, Maupin, CJ, and Pangaro, P (2010). "Bio-cost: an economics of human behavior", *Cybernetics and Human Knowing*, Vol 16, nos. 1-2 [in press].
- Dubberly, H., Pangaro, P. (2009) "What is conversation? How can we design for effective conversation?", *Interactions Magazine*, publication of the ACM, July / August '09. Available for download at <http://www.dubberly.com/articles/what-is-conversation.html>.
- Karjaluoto, E. (2008). *A Primer In Social Media*, smashLAB, Vancouver, BC, Canada. Available for download at http://www.smashlab.com/files/primer_in_social_media.pdf.
- Geoghegan, M. C., Dubberly, H., Esmonde, P., Pangaro, P. (2002). Notes on the Role of Leadership and Language in Regenerating Organizations. Produced for Sun Microsystems, Inc. Available for download at <http://www.dubberly.com/articles/notes-on-the-role-of-leadership-and-language.html>.
- Geoghegan, M.C., and Pangaro, Paul (2009). Design for a Self-Generating Organization. *Special Issue of the International Journal of General Systems*, Volume 38(2) (pp. 155-173), February '09.
- Levine, F., Locke, C., Searls, D., & Weinberger, D. (2000). *The Cluetrain Manifesto*. Cambridge MA: Basic Books.
- Pangaro, P. (1987) An Examination and Confirmation of a Macro Theory of Conversations through A Realization of the Protologic Lp by Microscopic Simulation. Ph.D. Thesis, Brunel University, UK. Available at <http://www.pangaro.com/PhD-thesis/thesis.html>.
- Pangaro, P. (2008). "Instruction for Design and Designs for Conversation". In R. Luppigini (Ed.), *Handbook for Conversation Design for Instructional Applications* (pp. 35-48). Hershey, New York: Information Science Reference Publishers.
- Pask, G. (1975), "Aspects of Machine Intelligence", in N. Negroponte (Ed.), *Soft Architecture Machines* (pp. 6-31). Cambridge, MA: The MIT Press.
- Pask, Gordon (1976). *Conversation Theory: Applications in Education and Epistemology*. Amsterdam and New York: Elsevier Publishing Co.

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