

## A User-Based Concept of Diminishing Returns

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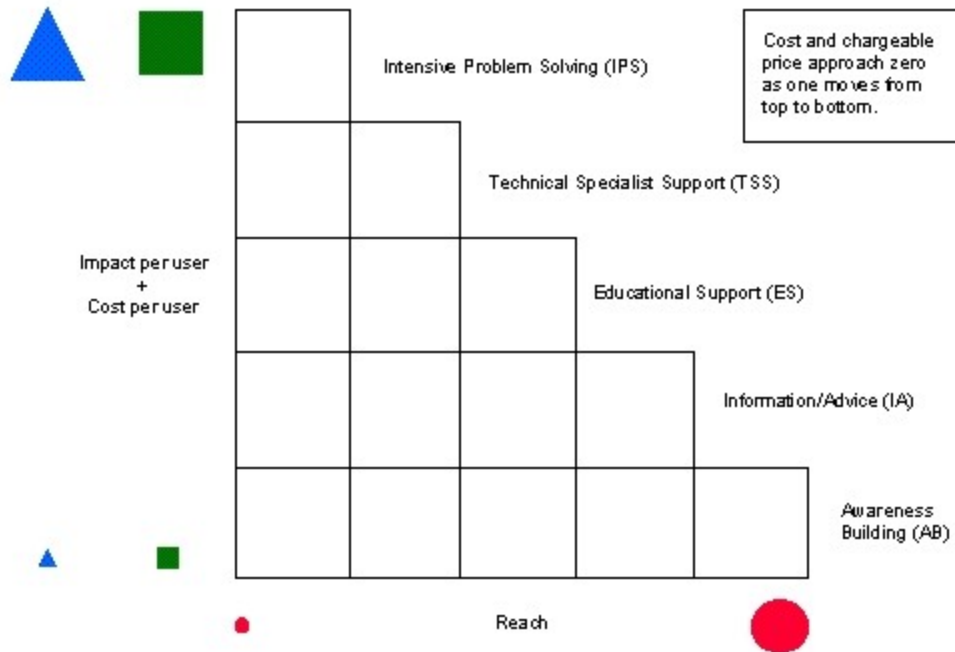
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### A User-Based Concept of Diminishing Returns

Knowledge-economy thinkers like Esther Dyson have pointed out that media like the information highway allow for ever widening reach, but with a cost. Dyson suggests that as an idea or piece of intellectual property disseminates more widely, its market price approaches zero. (See [Dyson's Release 2.0 A Design for Living in the Digital Age.](#))

The argument can be broadened in light of the overall framework of resources, reach, and results to put all products and services into context. (See [The Three Rs of Performance](#) - article or book). We have found that in fact all of the activities, functions, services, and products of an organization can be clustered by their profile of resource intensity per user, degree of expected impact on users (results), and the breadth of user dissemination (reach). The Dyson observation can thus be converted into a tool for analysis. Figure 1 below illustrates this concept.

**Figure 1**



Each category in the chart is explained below:

- **Intensive Problem Solving (IPS)**

The use of the product or service solves a major problem or addresses a key need for users. (For example, a whole business is re-engineered, new technology is implemented, a new mode of transportation or communication is acquired. These products or services drastically change a user's ability to do what he or she wants.) The relationship between supplier and user is intensive, heavily supplier-dependant, and usually long-lasting. It is also costly.

- **Technical Specialist Support (TSS)**

The use of a product or service solves an intermediate level problem or important need for users. (For example, such services would include tax planning and filing, fitness program coaching, and support for most travel or communications services. Users' lives will be directly affected by using these products or services in that their existing concept of work or play will hopefully be improved - but not radically altered.) The relationship between supplier and user is usually of medium intensity and may be limited in time.

- **Educational Support (ES)**

The use of a product or service helps users develop the skills or knowledge to help themselves. (For example, such services would include most public schools, colleges and other adult educational programs, workshops, seminars, and some conferences. Users' lives may be directly influenced, but only if they first learn to help themselves.) The relationship between supplier and user is of medium intensity as with TSS above but there is a higher degree of shared dependency for a successful result.

- **Information and Advice (IA)**

The use of the product or service improves the ability of the user to take a decision which then creates value for the user (e.g., answers to questions on how to resolve a software usage problem, advice on which products or techniques to use in a particular gardening, and cleaning or cooking situation). Users' lives will be affected if they choose to take action on the advice given and if they have the skills and knowledge to implement the advice.) The relationship between supplier and user is usually brief.

- **Awareness Building (AB)**

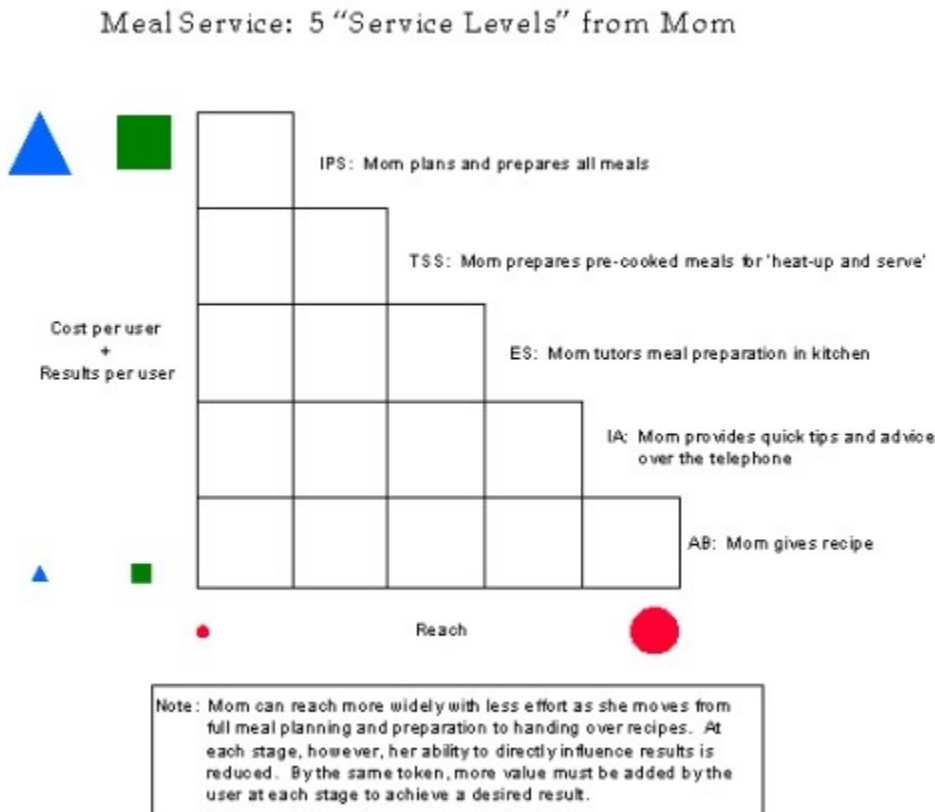
The use of awareness building products or services, like IA above, improves the lives of the users only if they appropriately receive the message and can act on it. The difference is that awareness building involves even more user engagement since the user must already be able to '*read*' the signals given without any need to probe or ask questions (e.g., mass media-newspapers, radio and television fall into this category, as do speeches or monologues, written instructions on packages, and most signs). The relationship of suppliers to users is usually one to many precluding any real '*relationship*' in the sense of the four categories above.

The point is that in a market economy, indeed price should approach zero for ideas which approach the awareness building phase. This is because the value to the user is increasingly user-created and decreasingly supplier-created. This reduces the economic '*rents*' which a supplier can charge for the idea (as manifested in the service or product).

For example, once I learn to read, find out where the food and utensils are, and master some simple elements of utensil handling, I can cook for myself. At this point, a recipe in the newspaper (an AB product) can replace my Mother's advice over the phone (IA service) which replaced her direct tutoring in person (ES), her preparation of frozen precooked meals (TSS), or her new creations from scratch and meal

planning while I lived at home (IPS). These points are noted in the chart in Figure 2. (From this logic we might expect that children in large families will tend to learn to cook for themselves early since their supplier 'Mom' must spread the reach of her services over more users. Thus the supplier 'Mom' will tend to *supervise* and *coach* (ES and IA) rather than *do* (IPS and TSS).)

**Figure 2**



This also means that you will pay a higher price per meal for a full restaurant or catering service, slightly less for frozen food, less (per meal) for most cooking classes, question and answer services (e.g., you pay by queuing for the service in a radio call-in) and finally, a recipe in the paper approaching zero cost to the user as this type of information moves to the World Wide Web.

The implications for notions of value and diminishing returns are nothing short of revolutionary. In conventional-industrial era economics, the law of diminishing marginal returns has been stated as:

*Holding technology and all inputs except one constant, as equal increments of the variable input are added, beyond a certain point the resulting rate of increase in*

*product will decrease.*

R. Miller, Intermediate Microeconomics, McGraw-Hill, 1978.

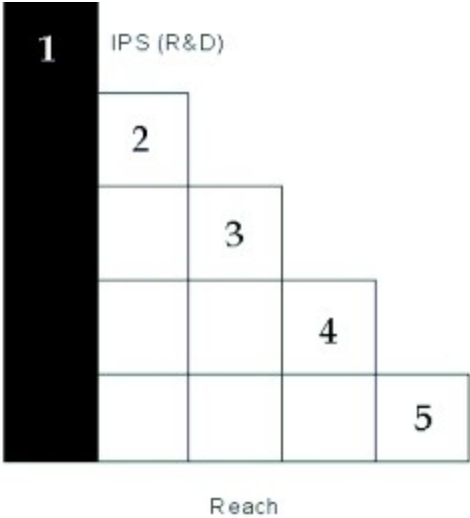
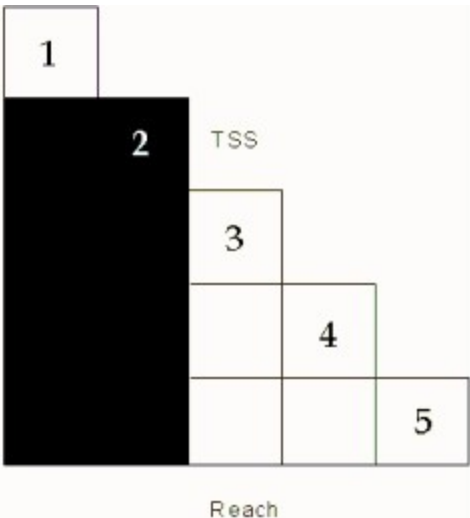
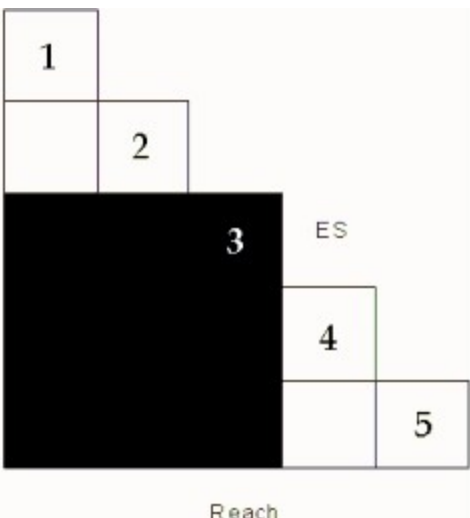
In light of our results-resources versus reach continuum, we consider 'marginal returns' to refer not to ***physical product*** - an efficiency function, but to ***utility per user***. The utility per user diminishes as we attempt to produce a product or service that is useable by more and more people. In our knowledge economy terms, the more knowledge required of the user to be successful, the lower the relative value-added and therefore the lower the potential 'per user' profit margins to the supplier.

For managers, this reinforces the idea that in areas of market uncertainty, you should not produce for optimal efficiency (output units per input), but rather for optimal value (net value-added or revenue per user x volume).

The model suggests that you should tailor your product or service according to the breadth of the desired reach and results expectation (to users) given limited resources. (That is, if you think you have discovered the perfect financial planning method, you can work with a small number of users, charge a lot per user, and look for stellar results (user value-added); you can give seminars and workshops, charge quite a bit per user, and expect significant results; or you can write a book and/or produce self-help tapes, charge a little per user and expect only hit and miss results to users. Ultimately, you can put your advice on the Web and basically recover nothing per user.)

Many ideas migrate through different reach-results categories. For example, some consultants and technical services providers give out free awareness building information in hopes of garnering clients for ES, TSS, or IPS services. In other cases, *'high intensity'* IPS or TSS products or services suppliers (e.g., large computer systems providers) might broaden out into lower cost (and price) per user services such as training or information and advice.

Hypothetical Case - Software

<p>Stage 1</p>	<p>R&amp;D or intensive problem solving to develop the software solution</p>	<p>Results per user + Resources per user</p> 
<p>Stage 2</p>	<p>Technical specialist support to help more users apply the software</p>	<p>Results per user + Resources per user</p> 
<p>Stage 3</p>	<p>Educate and train users so that they can use the software on their own</p>	<p>Results per user + Resources per user</p> 

<p>Stage 4</p>	<p>Provide a help-line and trouble shooting to assist users</p>	
<p>Stage 5</p>	<p>Create awareness re: the software solution (product) gain more usage - sales</p>	
<p>Note:</p> <ol style="list-style-type: none"> <li>1. These steps need not proceed linearly. For example, R&amp;D will likely go on continuously as other stages proceed.</li> <li>2. Each stage should <i>'inform'</i> other stages. For example, information from a help line re: most frequently asked questions should help specialist support and R&amp;D.</li> <li>3. Competitive pressures often breed an impatience among managers to rush to create awareness (sales) before other stages are appropriately in place. At the very least, interim stages should be developed in parallel to awareness building. (This could involve partnering with other deliverers, for example in educational support for software.)</li> </ol>		

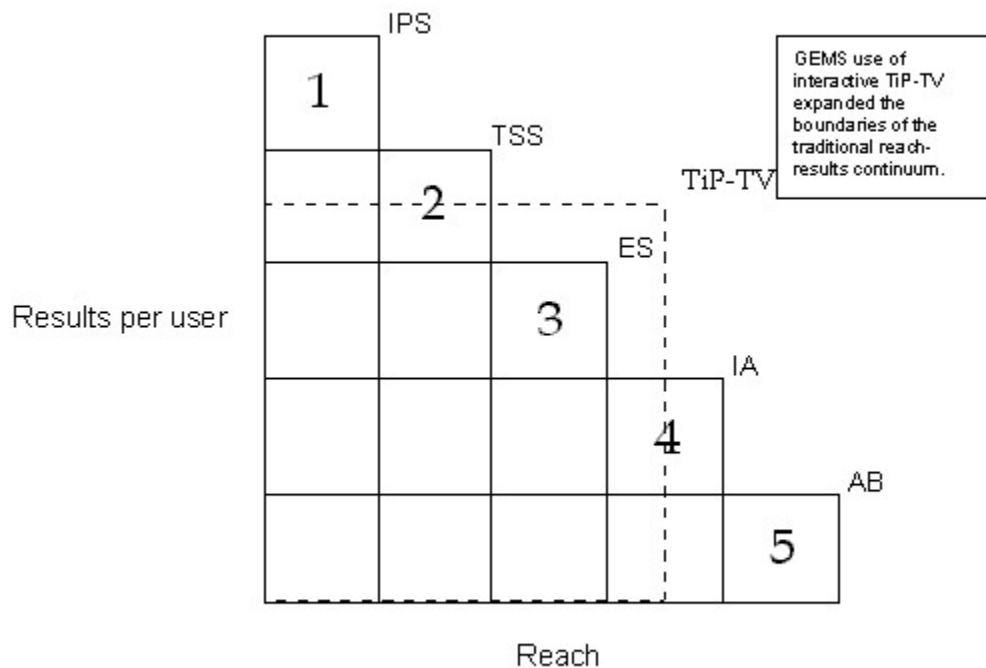
Some of the most promising opportunities to increase the added value of products or

services to users (customers) involve innovating along the reach-results continuum, often using new information technology.

Take General Electric Medical Systems (GEMS) of Waukasha, Wisconsin, ([Don Peppers, "How You Can Help Them," Fast Company, October-November 1997, p 128](#)) a supplier of diagnostic imaging equipment to health services providers. The company was faced with requests from technologists and radiologists for greater user support and training. The problem was that conventional technical specialist support (TSS) or educational services (ES) would have been very costly. Their innovation was TiP-TV, a series of real-time T.V. demonstration and live interaction instructional sessions, accompanied by written materials, which have allowed users to see equipment demonstrated, ask questions in real-time, and take away useful written material.

The hybrid of conventional awareness building (AB) broadcast technology with interactive information and advice (IA) combines to provide educational and technical specialist support (ES) and (TSS) providing high user impacts (results) while reducing the cost per user-allowing broader reach than that possible using traditional training methods.

**Figure 4**





The trick is to look at what adds value to the user. More often than not we have taken for granted and therefore neglected some part of the '*results-reach*' continuum. This area of service neglect is the true area of diminished *potential* returns. This new concept suggests that returns are diminished where user needs are not sufficiently met on the reach-results continuum.

Try constructing a results-reach continuum for your business, plotting your prime activities against it, then looking for potential gaps or improvement opportunities. You will have then taken a key step to becoming a truly client or user-driven enterprise.

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