

The official newsletter of
Fellowship of Reason, Inc.



On the Morality of My Job: Price Optimization

By
Ronald P. Menich

The other day I noticed our sewer and water bill on the kitchen table. For the last two months, during the midst of outdoor watering bans and statements by officials that the Atlanta area has only 3 months of water left, the water portion of the bill was only \$50. Even one relatively modest meal out on the town with my family typically costs more than \$50. In the long term, under pricing a product—any product—leads to shortages, and we are in the midst of a fresh water shortage. Certainly there are many *other* key factors influencing why we have a water shortage beyond just pricing—drought, requirements for flow to downstream power plants and shellfish, growing needs for water due to development and urbanization—but the fact remains that in the midst of all of these factors driving a water shortage, my water bill was only a trivial \$50. With such low prices, no private actor is incented to provide other supplies of water to Atlanta. But were my bill \$500 rather than \$50, then you can bet that there would be companies willing to fill whole supertankers full of water at the mouth of the Amazon, berth in Savannah and discharge the water into newly-constructed pipelines for shipment to Atlanta. Heck, oil is shipped to us from the other side of the world and we pipe it all over

the country, and we would do the same for fresh water were it priced highly enough.

Matters of pricing are dear to my heart. For over 12 years I have worked with a firm—now called JDA Software—pursuing the business function of software development and consulting services for revenue management. You may know about revenue management—also called yield management and price optimization—from your experiences as an airline traveler. Perhaps you have noticed that different people flying on the same aircraft pay different amounts for the privilege of doing so, and perhaps you have also occasionally been on an overfull flight for which volunteers were solicited to fly on a later flight. Revenue management systems control how many cheap tickets and how many expensive tickets to sell and how many bookings in excess of capacity should be taken to compensate for the possibility that passengers might cancel or no show. Modern revenue management systems also set prices directly and this is called price optimization. Our systems help companies increase their revenues by tens or hundreds of millions of dollars per year by forecasting

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demand and optimizing price and availability controls.

My goals in this and possibly subsequent lectures in some future FORum or FORa [the Latinized plural of FORum] are to teach you a little bit about price optimization and to explain why I think that it is a good or moral endeavor.

The services industries for which the business unit in which I work consults (including hospitality, air cargo, media, passenger rail, passenger airlines and so forth) are competitive: there is always more than one supplier in a market from which the service may be purchased. One might be tempted to think that with abundant competition available to punish stupid companies that there would be no public backlash against those companies who strive via clever pricing and availability schemes to make their revenues as large as possible. Unfortunately, I perceive that some folk initially respond to the concept of revenue management with revulsion. The idea that two people sitting in identical seats onboard the same airplane paid vastly different amounts seems to some to be wrong or unfair or "tacky" or unnecessarily confusing. To some, the idea that an airline or hotel should actively focus its efforts on extracting the maximum possible value from its customer populace seems too greedy.

But how should a company price what it sells? One idea you may hear voiced—a bad idea, in my opinion—is that a company should price its product so that the price covers the cost plus a small markup so that a *reasonable* or *fair* profit can be made. This approach is called *cost-plus pricing*.

Airlines were the first adopters of yield management and their adoption may have something to do with the fact that it is very difficult to adopt a cost-plus pricing mentality in that industry. One major problem which an airline faces is that of high fixed costs and relatively low variable costs: once an airline decides to fly a plane from Atlanta to Washington, D.C. on Wednesdays at 8am, much of the cost it will incur for doing so is predetermined and independent of how many people board the plane: the plane must be purchased or leased, pilots and flight attendants must be paid and much of the fuel burn is determined even if nobody boards the flight. As an extreme example of this last phenomenon, the new Airbus A-380 aircraft has a dry empty weight of over 300 tons; the variable cost contribution of one additional passenger and his bags is trivial compared to the fixed cost of just lofting the empty airplane.

One could consider allocating a portion of the fixed cost to each customer. However, it is not necessarily good business sense to do so, because large numbers of potential passengers may not be willing to pay that amount. Airlines have found it more profitable to pursue segmented pricing, also called price discrimination, in which low prices are offered to price-sensitive customers and higher prices offered to others. For example, low prices are offered to those passengers willing to sit in the economy compartment, whereas those who feel it necessary to sit in business class must pay much more. Although those who sit in business class receive free drinks, the business class passenger pays far more in relation to the economy class

About the name "The Eudaimonist"

A eudaimonist (pronounced "yoo-DIE-mon-ist") is one who believes that the highest ethical goal is individual happiness and personal well-being. The term is derived from the ancient Greek word eudaimonia, which means, roughly, "well-being."

Disclaimer

The opinions expressed in the columns appearing in this newsletter are those of the author and not necessarily the views of the organization. The Fellowship of Reason, Inc speaks only through its Articles of Incorporation, the Bylaws, and the actions taken by the Board of Trustees as a board and recorded in the minutes of the corporation.

Fellowship of Reason, Inc.**Mission Statement**

The Fellowship of Reason® is dedicated to the personal flourishing of our members through reason.

Fellowship of Reason, Inc. is a Georgia nonprofit corporation and a tax-exempt 501(c)(3) corporation

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FOR Merchandise

The mug you have to have.

FOR coffee. FOR tea. FOR a friend.

Mugs are \$6 each or 2 for \$10.



FOR Polo Shirts and T-shirts are also available. Members Price is \$25 for Polo Shirts and \$15 for T-Shirts.

Prices include domestic shipping, inquire for international shipping.

Contact us at any FOR function (see page 9)

Questions? info@fellowshipofreason.com.



On the Morality of My Job (continued from page 2)

passenger than the incremental variable cost to serve him drinks would, on its own, justify. Product differentiation and segmented pricing allows an airline to offer different products to different customers and to serve their differing needs and desires. Not every customer must pay an amount higher than variable plus allocated fix cost, but en toto and averaged over longer periods of time the amount of revenue must, of course, exceed cost in order for an airline to earn a profit and remain in business.

Another difficult aspect of airline revenue management is that of perishable inventory: once that 8am flight departs, any empty seats on that flight have no further value to anybody: they are spoiled goods. Unlike candy after Halloween, seats cannot be marked-down and placed on clearance after the plane departs.

These and other issues I have not elucidated (such as demand uncertainty, competition, government regulations, restrictive

union contracts and so forth) were and are intimidating obstacles to running a business, and the history of passenger aviation is littered with many business failures. Sir Richard Branson, the colorful CEO and founder of the Virgin Group (which includes Virgin Atlantic Airlines) was once asked by a reporter how to become a millionaire, to which Branson wittily replied, "First, be a billionaire, then buy an airline!"¹

After deregulation in 1978, the airline industry began to adopt revenue management practices and within a decade other industries such as hospitality with similar issues began to follow suit. Simply stated, revenue management seeks to maximize revenues by selling the right product to the right customer at the right time at the right price. Revenue management adjusts the price and availability of airline seats, hotel rooms, car rentals and the like as the forecasted supply, demand and competitive situation changes at a micromarket level. A downtown hotel room is simply worth more on Tuesday night than on a Friday night because

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there's more demand for downtown hotel rooms on Tuesday nights. A revenue management system will restrict low-value customer demand from consuming Tuesday nights, holding that inventory for other guests willing to pay more.

Let me give a simple numerical example of price optimization. Consider a hypothetical hotel with 100 rooms for which customers may stay only one night. Suppose that an oracle tells us that if we set the nightly rate to \$89 for the night of November 21st, then demand at that rate will be 120 rooms. Because that so-called *unconstrained* demand of 120 rooms is much more than the number 100 of available rooms, only 100 of the 120 potential guests will be able to reserve a room and the hotel will become unavailable for booking at some point. For example, the first 100 bookings for the stay night of November 21st might already have booked by November 15th, in which case nobody would be able to book during the last several days before the arrival date: the hotel would be sold out. In this case the revenue to the hotel would be $100 \text{ rooms} * \$89 = \$8,900$. Now suppose that the oracle further tells us that if we were to raise the price instead to \$99/night, then demand would shrink to exactly 100 rooms. In this case we could accept all the reservations that come, and revenue would be $100 \text{ rooms} * \$99 = \$9,900$. Thus, if we set the price to \$99/night, we earn \$1,000 more or 11% more than if we were to set the price at \$89/night.

Of course there is no oracle who can tell us exactly what demand would be if we charged such and such a rate. But reasonable estimates or forecasts of demand and price response behaviors can be

constructed from historical data, and indeed this is a major part of the value which my company provides. If our best guess of how demand really behaves is demand of 120 rooms at \$89 or else demand of 100 at \$99, then it behooves us to price at \$99/night if we only have 100 rooms to sell.

But is it good or moral for a hotelier to price at \$99/night and extract that extra \$1000 from the customer populace? Of course, there is a simple issue of freedom here: a hotelier, in my opinion, should be able to charge whatever it wishes, and to bear the consequences of doing so if it makes poor choices. One mistake a hotelier may make is called *spoilage*: if it prices too high it may chase away too much demand, with the consequence that many rooms will remain empty that could have been filled. Another mistake a hotelier may make—one called *spillage*—is to set its rates too low and fill all its rooms with low-valued demand, some of which could have been filled with higher-valued demand.

But arguments that a hotelier should have the freedom to price and to bear the possible negative consequences of doing so poorly are unfortunately rarely convincing arguments, so let me try another tack. Rationing is what happens when we price too low at \$89/night, because only 100 of the 120 potential guests willing to pay \$89 can actually book at that rate: 20 are denied. The form of rationing which decides which 100 guests actually get the room is first-come, first-served: those 20 potential guests who wish to book during the last few days before arrival are unable to do so, and must go elsewhere if indeed that is still

Meaning of Membership

Regular membership:
\$35 per year

Contributing membership:
\$70 per Year

Lifetime membership:
\$700

In order to enjoy the benefits of the Fellowship of Reason, you need not be a member. All of our activities are free and open to the public. A number of non-members regularly participate with us and are most heartily welcome.

Why then become a member of the Fellowship of Reason?

The Fellowship of Reason exists by virtue of the generosity of its members and friends. People you know contribute money, property, services, and time in order that the value we all enjoy continues to exist. The services by performers at FORum, by executive committee members, by hosts and hostesses, and by planners of events are vital to the existence of FOR. Those

volunteer services are, in fact, FOR.

Membership is, simply, a clear statement that you wish the Fellowship of Reason to continue to exist. Membership is not the only way to make this statement. Some non-members are generous contributors of money, property, and services. In fact, we all benefit by the mere attendance of non-members at FOR events.

If you want FOR to continue to exist, why not clearly say so by becoming a member today?

Classic Film Appreciation Course

Classic Film Appreciation Course
By Steve Whiteman

Throughout 2008 FOR member Steve Whiteman will again teach a free course in the appreciation of classic film and associated popular culture. The course is full, but seats may become available to see individual films.

The movies will be recognized classics, the majority from Hollywood's Golden Age—the 1930s and 40s—and the rest from other eras or other countries, with broad exposure to key directors, actors, and genres.

Programs will include a cartoon and/or short subject; coming attractions; the

feature film; and clips and commentary on personnel, techniques, and relevant popular culture, with discussion interspersed. Books and films will be prizes in the regular trivia contests.

The course will meet twice a month, on the evening of the first and second Saturdays. For more information, to check on the availability of drop-in slots, or to be put on the mailing list, email Steve at classic.film@yahoo.com.

"If you're looking for an antidote to movie mindlessness, look no further than Steve Whiteman's movie course. It is enjoyable, educational, thought provoking, and just plain fun." (2007 Participant)

Letters to the Editor

Please support your newsletter by giving us feedback.

Contact Information

To talk to somebody about Fellowship of Reason call:

Martin at 770-471-9800

Dan at 770-831-3010

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possible. Is seeing a “No Vacancy” sign preferable to one saying “Rooms Available \$99/Night”? I think not. Some of those first 100 out of the 120 guests who were willing to pay at most \$89 might not truly need to travel, or might be willing with some inducements to travel at other off-peak times. By contrast, some of those last 20 out of 120 potential guests who were denied but who might have been willing to pay \$10 extra per night might have been desperate to find a room at your hotel, but were unable to do so. In fact, this is a pattern commonly seen in travel and hospitality: price-sensitive, early-booking demand is more leisure-oriented and responsive to flexible travel offers. Late-booking business demand is less flexible and less price-sensitive. Grandma and Grandpa have some flexibility about when they travel and they are concerned about getting the best deal. The business woman must get a room tonight in order to be present at her 8am business meeting tomorrow, and may be willing to pay more than Grandma and Grandpa in order to do so. Revenue management provides choices—choices, not rationing—to these different customer segments.

Consider also that customers are able to shop different hoteliers for the cheapest available rates using Orbitz, Travelocity and dozens of other means. Via price optimization, the hotelier can shop for the most valuable 100 guests to fill the hotel out of a larger population of potential guests. If customers are able to shop for the best hotel rates, then so too should hoteliers be able to shop for the best guests.

I am quite proud to be able to help companies maximize their revenues

via pricing and availability control. Lack of attention to pricing and availability management can be a contributing cause of business failure. Millions upon millions of people are shareholders, either directly holding stock or indirectly investing through mutual funds or other instruments. These investors expect their investments to grow over time and to pay for college tuitions and retirement. My work helps companies avoid business failure and to provide a better return on investment to their shareholders. I help hotel, air and car rental companies shop for the most valuable customers. For doing so, I have nothing of which to be ashamed. Price optimization is moral.

FOR's mission is to promote the personal flourishing of our members through reason.

December 2007

December 2007							January 2008						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30	31		
30	31												

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						December 1 7:00pm Classic Film Appreciation Course (Steve Whiteman's house)
2 12:00pm FORum (NWUUC)	3	4 7:30pm Philosophy Tapes (Sally's house)	5 7:30pm Invisible College (Greg's house)	6	7 6:00pm 1st Annual Christmas Party (Broadnax & Martin, P.C. - 1590 Adamson Parkway, Suite	8 11:00am Nonfiction Book Club (Allison's house) 7:00pm Classic Film Appreciation Course (Steve
9 Bruce bd 8:00am FOR Runners (Flying Biscuit)	10	11 7:30pm Fiction Book Club (Beth's house)	12 7:30pm Invisible College (Greg's house)	13	14	15 1:00pm FOR live HD opera (Romeo et Juliette) 7:30pm Potluck (Martin Cowen)
16 8:00am FOR Runners (Flying Biscuit)	17	18 7:30pm Philosophy Tapes (Sally's house)	19 7:30pm Invisible College (Greg's house)	20	21 Bill G. bd	22 6:30pm Movie Night (John's studio)
23 8:00am FOR Runners (Flying Biscuit)	24	25 Christmas	26 7:30pm Invisible College (Greg's house)	27 Leanna bd 8:00pm FOR pub	28	29 Andrew bd
30 Mike bd	31					

January 2008

January 2008							February 2008						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28	29	

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		January 1, 2008	2	3	4	5
		New Year's Day 1:00pm FOR live HD opera (Hansel and Gretel) 7:30pm Philosophy Tapes (Sally's house)	7:30pm Invisible College (Greg's house)			7:00pm Classic Film Appreciation Course (Steve Whiteman's house)
6	7	8	9	10	11	12
12:00pm FORum (NWUUC)		7:30pm Fiction Book Club (Beth's house)	7:30pm Invisible College (Greg's house)			11:00am Nonfiction Book Club (Allison's house) 1:30pm FOR live HD opera (Macbeth) 7:00pm Classic Film Appreciation
13	14	15	16	17	18	19
8:00am FOR Runners (Flying Biscuit)		7:30pm Philosophy Tapes (Sally's house)	David S. bd 7:30pm Invisible College (Greg's house)		Vera bd	7:30pm Potluck (Volunteer)
20	21	22	23	24	25	26
8:00am FOR Runners (Flying Biscuit)			7:30pm Invisible College (Greg's house)	8:00pm FOR pub		6:30pm Movie Night (John's studio)
27	28	29	30	31		
8:00am FOR Runners (Flying Biscuit)			Mark bd 7:30pm Invisible College (Greg's house)	Sally bd		

Events

For detailed info on all upcoming events, visit
<http://www.fellowshipofreason.com/calendar.htm>

FORum: A Celebration of Human Achievement

First Sunday noon
 FOR's premier event. Starting at noon with an InFORmation Hour conducted by Dan Barber for visitors and new members. Meet and greet at 12:30 p.m. The program starts at 1 p.m. and lasts one hour. We enjoy post-program conversation until 3 p.m. when those interested adjourn to The Loop restaurant for further fellowship. Children's Program from noon to 3 p.m.

Martin Cowen director: 770-471-9800.

FOR Runners: Sunday 8 a.m.

We meet every Sunday morning at 8 a.m., except FORum Sundays, at the southwest corner of Piedmont Park on 10th Street. Breakfast at Flying Biscuit (corner of Piedmont and 10th Street) follows at 9 a.m. Breakfast lovers, walkers, and joggers welcome!

Martin Cowen coordinator: 770-471-9800.

Philosophy Club: 1st/ 3rd Tuesdays 7:30 p.m.

Philosophy tapes are played to a small group of friends in a private home on the 1st and 3rd Tuesdays of each month. Free.

Sally Hull coordinator: 404-257-0454

Fiction Book Club: 2nd Tuesday 7:30 p.m.

Members and friends of FOR meet on the 2nd Tuesday of every month at John and Beth's house. For book selections and more information, go to www.fellowshipofreason.com/fiction.htm

Beth Holley coordinator: 404-372-7378

Non-Fiction Book Club: 2nd Saturday 11 a.m.

Members and friends of FOR meet 11 a.m. on the 2nd Saturday of every month at Chris and Allison's house. For book selections and more information go to:

www.fellowshipofreason.com/nonfiction.htm

Allison Byrd coordinator: 404-372-4089

Potluck / Christmas Party: 3rd Saturday 7:30 p.m.

Our next Potluck is Saturday, December 15, 2007, at Martin Cowen's house at 7:30 p.m. Remember it is potluck, so bring something good to eat and drink to share. Also, if you want to participate in our annual gift exchange game, please bring a wrapped gift (\$25 or less and no joke gifts, please.)

Pub Night: 4th Thursday, 8 p.m.

Members and friends of FOR meet on the 4th Thursday of every month at Manuel's Tavern at 8 p.m. for adult beverages and adult conversation. FOR's next pub night is Thursday, November 29, 2007 at 8 p.m.

Scott Carper coordinator: 404-964-6697

Movie Night: 4th Saturday, 6:30 p.m.

Members and friends of FOR meet on the 4th Saturday of every month at John Grover's photography studio to enjoy potluck and a movie. FOR's next movie night is Saturday, December 22, 2007, at 6:30 p.m.

John Grover coordinator: 404-872-4555

*Join us for our
 next monthly
 FORum:*

**December 2,
 2007**

Sunday at 1 p.m.
 (Meet, Greet at 12:30)

Come early for the
**InFORmation
 Hour**

At noon
 Moderated by Dan Barber for
 visitors and new members

FOR FAMILY FRIENDLY

Children's program
 from noon to 3 p.m.

Birthdays

- | | |
|---------------|-----------|
| • December 9 | Bruce H. |
| • December 21 | Bill G. |
| • December 27 | Leanna A. |
| • December 29 | Andrew S. |
| • December 30 | Mike B. |

- | | |
|--------------|----------|
| • January 16 | David S. |
| • January 18 | Vera N. |
| • January 30 | Mark S. |
| • January 31 | Sally H. |

Celebratory Announcements

Do yourself a favor and remember a good thing that happened to you this month:

Please, write it down: _____

Now do the membership of FOR, Inc. a favor by relating this fact during FORum next month!



Fellowship of Reason

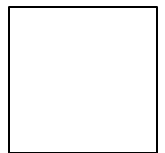
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A Reason-Based Moral
Community for the 21st
Century

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See us at:

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