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Appeal and Affinity

by David Giovannoni
(31 pages)

Originally published as:

Giovannoni, David. "Radio Intelligence: What Connects Programming with the Audience It Creates?." Current, Vol. 12, No. 12, June 28, 1993.

Giovannoni, David. "Radio Intelligence: Which Shows Work with NPR Magazines?." Current, Vol. 12, No. 2, July 12, 1993.

Giovannoni, David. "Radio Intelligence: Aversion Program Pairings That You May Want to Avoid." Current, Vol. 12, No. 16, September 6, 1993.

Giovannoni, David. "Radio Intelligence: How Do We Get the Most Reliable Picture of Programming Appeal and Affinity." Current, Vol. 12, No. 17, September 20, 1993.

Giovannoni, David. "Radio Intelligence: Future Radio Networks: Stream with Consistent Appeal." Current, Vol. 12, No. 19, October 18, 1993.

Giovannoni, David. "Radio Intelligence: Coming Soon: Do-It-Yourself 'Sharenets' Based on Appeal." Current, Vol. 12, No. 21, November 15, 1993.

Giovannoni, David. "Radio Intelligence: Seize the Occasion: It's Your Chance, 20 Times a Week." Current, Vol. 12, No. 23, December 13, 1993.

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WHAT CONNECTS PROGRAMMING WITH THE AUDIENCE IT CREATES?

by David Giovannoni

And although it doesn't sound like it when **we're** *on,*
this **is** *NPR — National Public Radio.*
—Tom or Ray Magliozzi

You're pretty certain it's a dream but you can't wake up. In your head the scene plays out like videotape. Monte Hall draws his cards to his chest and asks, "Which door will it be?"

- Printed in distinguished typeface across the top of Door Number One is the program combination "*Sound Money & Marketplace.*"

- "*Morning Edition & Car Talk*" is scrawled across Door Number Two in purple crayon (looks like Doug Berman's handwriting).

- And on Door Number Three, underneath the squiggly blue thing that NPR uses for a logo, is "*All Things Considered & Talk Of The Nation.*"

Everyone is watching you. Your honor, prestige, and reputation rest on this decision. Or maybe not. Glancing at the monitor you see a bouncing buffoon in a chicken costume. He has your face.

So which door is it? You know the rules — *pick the door with the two programs that work best together.* Choose the combination with the highest affinity and you enhance your station's public service. Select the wrong combination and you'll want to keep the chicken costume on.

The pressure is made worse by the noise from the crowd. One group chants "Door Number One! Door Number One!" — they think pro-

grams about money go well together. But just as this logic starts to make sense Monte says, "And to make your choice easier I'm going to show you what's behind Door Number One."

And the door swings open to reveal two audiences — one ten years and a financial generation older than the other — and the people around you cheer and jeer and you thank your lucky stars that you didn't fall for the old "same program content" trick and now the pressure's really on.

You tune out the shouts of people disguised as rodents, reptiles, vegetables, fruits, and kitchen appliances and use your own reasoning.

- There's a lot that's the same about *ATC* and *TOTN*. Both are fairly serious news shows, done in the NPR news style, stamped with the "NPR News" imprimatur, and produced in the same building.

- There's a lot that's dissimilar about *Morning Edition* and *Car Talk*; different formats, styles, attitudes — even NPR doesn't make them available in the same package.

Just then Monte grabs your arm and you squawk "Door Number Two!" and your beak screws up anticipating that one-way ticket to Palookaville.

And Door Number Two opens wide and people cheer because you did indeed pick the best combination. You're hailed as a hero — one who

understands that two programs with very different formats, sounds, attitudes, and topics *can* work together to serve exactly the same kinds of listeners.

But that pounding poultry heart of yours knows the truth. You got lucky.

Decisions, Decisions

This silly scenario isn't too far removed from how most public radio stations are programmed. Every hour of every day programmers must choose just one of the many available programming doors.

Which would best serve the station and its listeners? Most haven't a clue. And even those who have control of their on-air talent wouldn't know the most appropriate directions in which to guide their efforts.

This isn't a criticism. It's a fact. The reliable information needed to make these decisions just isn't available. If anyone's to blame, it's public radio's researchers and analysts.

Five years ago AUDIENCE 88 developed the concept of appeal as the connection between listeners and programming. But our application of this promising concept hasn't really progressed since the report was published. We simply dropped the ball.

Here we pick up the ball and run with it. This column begins an extended series updating the notion of appeal and its many applications. Through the summer and into the fall we'll focus on the links between listeners and programming. In particular, we'll reassess the appeals of and affinities among national programs and local program types. Along the way we'll explore the many ramifications of this highly practical information.

We begin by defining our terms.

Appeal

Every minute of radio programming offers an attraction for a certain type of person. This attraction — the quality that brings listeners to it — is called appeal. People listen to programming because it appeals to them. They choose one station over others because it is the most appealing at that time.

As a verb, to appeal means to provide a service that attracts certain types of listeners more than others; as a noun, appeal is the attribute of the service, often intangible, that attracts these listeners.

- The appeal of a program is inseparable from those who listen. The program creates the listeners, and the characteristics of the listeners define its appeal.

Understanding appeal is essential for station programmers, because

- the interplay of the programs comprising a station's weekly schedule — their affinities with each other — determines the degree to which a station will or will not serve listeners.

Affinity

As broadcast professionals we understand some programs simply work better in combination than do others. Affinity has everything to do with this.

- Programs that serve very similar audiences — programs with highly congruent appeals — are said to have ***affinity***.

Programming that appeals to one type of person may not appeal to another; in the extreme, it may be repulsive. For example, the type of person who listens primarily to an easy listening station is typically repulsed — quite literally — by the music, jocks, and spots of a heavy metal station. He or she finds the offending station's entire sound and attitude repugnant.

Of course repulsion works both ways. Just ask any rocker his opinion of elevator music.

Virtually all public radio station schedules offer a patchwork of programs. When two adjacent programs have dissimilar appeals — that is, when they share little or no affinity — they create a seam in the patchwork; the more apparent the seam, the more listeners it irritates and turns off.

Irritating listeners is not the way to become a valued public service.

Examples abound of public stations joining programs that are literally as different as elevator music and heavy metal. It happens every day when *Morning Edition*'s listeners are treated to music more appealing to their parents, or every Saturday when *Car Talk*'s audience is slammed into live opera coverage.

Indeed, these program combinations don't have to be adjacent. As we'll see in subsequent columns, programs like *Spoleto Festival* and *JazzSet* just don't work in schedules built around *Morning Edition* and *All Things Considered*. Each may work well in some other setting, but either would be highly counterproductive in an NPR-news-driven schedule.

Program Type

We naturally classify programs by their type. Are they talk or music? If talk, are they news or entertainment, serious or whimsical? If music, are they pop or jazz or classical or some other genre?

The problem is, we often incorrectly equate a program's type with its appeal. They are not the same. This is probably the hardest thing to understand about the notions of appeal and affinity.

- A program's appeal, and subsequently its affinity with other programs, is determined by the qualities of listeners it attracts — not the type or genre of the program itself.

In other words, there's no guarantee that any two programs of the same type or genre will have high affinity and work well together. Just being "classical" doesn't guarantee that they'll appeal to the same kinds of listeners. Just being "about money" doesn't make *Sound Money* and *Marketplace* a good match. And just because *All Things Considered* and *Talk Of The Nation* are both NPR afternoon news products doesn't mean they're a happy couple.

Indeed, the appeals of programs *of the same type* can differ dramatically. This is particularly evident in the schedules of public radio's "all news" and "all classical" stations, where programs that are "in format" don't serve core listeners as well as other programs do. The example from AUDIENCE 88 was opera — one type of classical music that had precious little affinity with most other classical music.

If affinities are independent of program types, does the converse hold true? That is, can programs of wildly different types attract and serve the same people? You bet your life they can — and do.

A Prairie Home Companion was AUDIENCE 88's central example. This entertainment program played a lot of music, and featured imaginary rather than real news. Even so, its appeal

was right down the line with that of "hard news" programs *Morning Edition* and *All Things Considered*. *Prairie Home* offered Saturday night entertainment to NPR news listeners.

Keillor's reincarnation as a New Yorker significantly altered the appeal of *American Radio Company*. Today, *Car Talk* is the preeminent example of a show that serves the NPR news audience with non-news programming. Click and Clack are right — *Car Talk* *is* NPR — at least, the NPR that *Morning Edition* and *ATC* listeners come to hear.

That said — and the point hammered home that program type is no substitute for appeal — we must note that recent research suggests program type does seem to influence appeal. Some people just plain prefer information to music, real news to entertainment, serious to funny. Our study of affinities and appeals will strive to shed light on the interactions between type and appeal.

Variety, Affinity, and Service

Variety is the dogma of many public broadcasters' theology. In the study of appeal and affinity, it's critical to distinguish between two types of variety.

- *Program variety* is the contrast in the types of programs and programming available on a station. *All Things Considered*, *Marketplace* and *Car Talk* are different programs; they offer programmatic variety.

- *Audience variety* is the contrast in the types of persons served by each type of program or programming on a station. Programs that appeal to younger persons are different than programs that appeal to older persons; they are audience-diverse.

Program variety has to do with program type or genre, and program type is how many people (incorrectly) assume appeal and affinity work. Audience variety has to do with the types of listeners caused by various programs. Types of listeners is the root of how appeal and affinity actually work.

AUDIENCE 88 found that the more types of programming a person listened to during the week on a public station, the more likely he or she was to support the station. This strongly suggests that *program variety is good — but only if these diverse programs appeal to the same listeners.*

These findings suggest a hierarchy of program schedule strategies.

- High affinity (consistent, congruent appeal) among diverse program types may constitute the most effective, valued public radio service.

- High affinity without program variety may also constitute a highly effective, but less valued, public radio service.

- Low affinity among programs offers the weakest public service, regardless of the mix of (or consistency among) program types.

Power and Other Considerations

Appeal and program type may determine *who* will listen, but neither indicates *how many* will listen. A program's **power** is its ability to reach out to listeners and draw them to the station. Power signifies strength. Two programs of the same type may appeal to the same kinds of listeners; but the one that attracts and serves more people per minute has more power.

Power can be determined by Arbitron data. Assorted statistics reflect the various facets of power: cume rating indicates the power with which a station reaches into the population;

share shows the strength with which it competes in the market; and loyalty is its ability to serve its own cume.

• A radio program's appeal, type, and power work together to determine the size and composition of the audience that will be served by it.

What about the ability of a program to move a person to tears or laughter, to anger or delight, from one opinion to another? This slippery but very real attribute is something producers strive to achieve and listeners tell us they value. Fundraising suggests that certain programs have more impact on people than do others. Indeed, a program's ability to influence people in this way may be what causes them to consider it personally important — the perception most firmly connected with their financial support.

AUDIENCE 88 was the last national study to examine this facet of programming's effect on listeners. Unfortunately, this question demands a kind of measurement not available to us today. Our study of this *quality* — and I do mean to imply all senses of that word — awaits some future opportunity.

Yet there's still plenty to work with. As touched upon here, appeal, affinity, and power have much to say about assembling program schedules to maximize public service. They talk to the ways in which networks might better package and distribute their program services. They suggest how producers (local and national) may create more effective and influential programming. And they inform our planning for public radio's multi-channel, multi-service future.

Editor Steve Behrens interviews the author.

What's so important about appeal and affinity that you want to devote the rest of the year writing about them?

Programming is the attraction and appeal is the force that draws people to any radio station. If public radio's mission is to serve significant numbers of listeners with programming of significance, then in my opinion there's no force more important to understand.

The notion of affinity — how well programs fit and work together to maximize audience service — has been a central paradigm for me since addressing it in the AUDIENCE 88 reports. A number of people have been using the notion to good effect — it was central to the Programming Task Force's evaluations and suggestions, for instance. And we've been toying with appeal and

affinity in individual stations' audience analyses for some time now. I just think it's time to pull together what we've learned the last few years and move our thinking forward.

How do you do this?

In order to study how programming causes audience, you've got to have both programming and audience data. For these we owe a large debt to public radio's cooperative spirit. The Radio Research Consortium has made available public radio's Arbitron diaries, which themselves were cooperatively purchased by stations, producers, and funders. And NPR has provided its detailed carriage and programming data, gathered with the cooperation of stations and a little financial help from CPB.

When combined in a computer, programming and audience data can produce appeal

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and affinity information. That's the easy part. The hard part is the analysis, writing, and publishing. CPB and CURRENT have been very supportive in these efforts.

Give us a few concrete examples of how appeal and affinity information can be used by public broadcasters.

The first is alluded to in this column. Although the program schedules at stations are cleaner and more effective than a decade ago, most are still basically dysfunctional. Judicious, disciplined selection of programs from the satellite is absolutely essential, as is the purposeful creation of local programming and guidance of its producers and talent. What programs should be selected or produced to maximize audience service? A clear understanding of appeal and affinities is the key.

Second, the current buzz is about public radio's multi-channel, multi-service future. Of course this will happen whether we actively plan and react to it or not. It's already well underway, with the majority of Americans capable of hearing at least two public stations. Stations with overlapping signals can turn to appeal and affinity for guidance to make programming decisions that will best serve their communities.

We're already seeing the emergence of "all news" and "all classical" public stations. Our studies suggest that we've got to get beyond this simplistic "consistency of genre" mindset in order to offer effective, listener-satisfying program schedules. AUDIENCE 88 showed us that listeners don't consider opera to be classical music. The same holds true with many of our news

and information shows. When you compare listeners and see that *Monitor Radio Daily Edition*, *Soundprint*, and *National Press Club* have less in common with *ATC* than *Thistle & Shamrock*, *Music From The Hearts of Space*, or *Mountain Stage*, you just can't maintain the assumption that all information programming — no matter how good — has a place on an "all news" station based on *Morning Edition* and *ATC*.

Our national networks are really way behind on this. With *Car Talk*'s remarkable appeal to *Morning Edition* and *ATC*'s listeners, can you imagine any network not making all three programs available in the same program stream? National programming is in dire need of a major sorting along the lines of appeal and affinity. Putting high affinity programs together, in the same streams on the same channels, will help get them cleared by the most appropriate stations and get them heard by the most receptive listeners. It will also help to get programs off of stations where they're now doing damage.

This must sound pretty heretical. A network encouraging a station to drop one of its programs? News stations that don't carry *Press Club*? Classical stations that don't clear the *Met*? It's my job to study how programming effects listeners, and these are just a few of the findings that jump off the page. My work tells me that we need to inform our decisions with appeal and affinity data as soon as we can. Because if we don't, I fear the *Let's Make A Deal* nightmare will become real, only it will be our listeners — not Monte Hall — showing us the door.

WHICH SHOWS WORK WITH NPR MAGAZINES? WHICH WORK AGAINST THEM?

by David Giovannoni

The reason our core audience isn't loyal to our station is that our station isn't loyal to our core.

-Mark Ford, KVNO-FM

Public radio suffers no shortage of quality programs. Several station schedules could be filled from satellite feeds alone, and eager local talent abounds.

The Program Director's job is to air the programs that focus on the needs of the type of listener the station chooses to serve. Unfortunately, audience focus typically takes back seat to program variety in public radio.

Half of all stations broadcast more than 14 different types of programs each week. That's program variety all right, but too often the appeals of certain programs miss the mark. Rather than working **with** the dominant programming on the station to bring variety to the its core audience, these programs drive core listeners away.

This is a failing of public radio's research, not its PDs. Without the data to assess beforehand which programs may well-serve or drive away their listeners, it's no wonder PDs feel programmatically-challenged, and no surprise that station schedules are programmatically-impaired.

Our study of appeal and affinity has much to say about which programs and what types of programming **work together** to serve certain types of listeners. Here we'll examine which nationally-distributed programs do and don't work for people who listen to *Morning Edition* and *All Things Considered*.

These programs offer a good place to start. They define the audience for many public stations. One in four hours that listeners spend with public radio nationally are tuned to these two programs. Typically half of the listening to stations airing both programs is generated during these programs.

Affinity Rankings

To discover which programs work well with the NPR daily news magazines, we need to determine the types of people who listen to each program, and then compare them to the NPR news listeners.

When the audience profiles of programs are very similar, they have high affinity — they serve the same types of listeners and have great potential to work well together. Programs with different audience profiles have neither the same appeal nor affinity — there's no way they can work together to serve the same type of listener.

The affinity rankings for weekday *All Things Considered* are shown in this document. *Morning Edition*'s rankings are quite similar.

Working from the bottom up, we immediately notice that most programs have low or no affinity.

- Most nationally-distributed programs just don't serve the same kind of person who listen to NPR's daily news magazines.

Indeed, the appeals of programs on the bottom of the list are so different that they shouldn't be on the same station. Not that programs such as *Morning ProMusica*, the *Met*, *BluesStage*, and *JazzSet* are "bad" — they just don't serve the same kinds of listeners as *ATC* and *ME* do. Putting them into the same program schedule would have the same audience impact as dropping cuts of Heavy Metal into an Easy Listening format.

Programs at the top of the list are good candidates for scheduling adjacent to the daily NPR news magazines. In fact, because the programs serve the same type of person, weekday NPR news listeners are likely to welcome them in the station's schedule any time.

But herein lies an important point.

- Low affinity guarantees that two programs will not work well together. They can be ruled out of the same program schedule with certainty.

- High affinity does not guarantee that two programs will work well together. Professional judgement must prevail.

The reason for this is the limited nature of our measurement — age, sex, and minority compositions aren't always the dimensions in which appeal works. For instance, when we compare the age, sex, and minority compositions of public radio and country stations, we find that they appear to have high affinity. But we know they don't. Were Arbitron to provide a fourth variable — education — our affinity score would show low affinity or even aversion.

So there's no guarantee that *Whad'ya Know* or *Thistle & Shamrock* will serve NPR news listeners. There's still plenty of room for professional judgement calls and risk taking. But with the guarantee that the *Lyric Opera* and *Marian McPartland* and *Radio Reader* will not serve NPR news listeners, the program options and their associated risks are greatly reduced.

CALCULATING APPEAL AND AFFINITY

Arbitron reports three audience traits that we can use to assess appeal — age, sex, and a characteristic that it calls "race." Age and sex are determined for all listeners. Race is limited to blacks and Hispanics, and is asked only where populations of black and Hispanic persons exceed certain thresholds.

The first step is to determine the appeals of the individual programs and program types. This study does so by calculating the average quarter-hour audience composition of each program across twelve age/sex demographics plus blacks and Hispanics.

By definition, the compositions of the age/sex demographics add to 100 for each pro-gram. The percentage of listening done by blacks and Hispanics is calculated over the percent of audience for which Arbitron ascertained these characteristics; the sum across these two groups can range from 0 to 100.

The next step is to calculate affinity scores — simply the Pearson correlations between programs across these 14 demographics. Scores approaching 1.00 indicate high affinity; scores approaching zero indicate no affinity; negative scores indicate aversion.

The table on the following page shows the affinity scores for a select group of programs. The second translates these scores into icons, ala AUDIENCE 88.

Audience Composition of Each Program

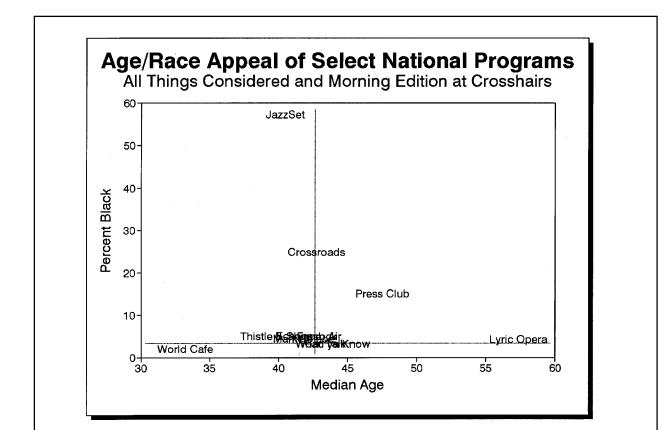| Men						Women								
12-24	25-34	35-44	45-54	55-64	65+	12-24	25-34	35-44	45-54	55-64	65+	Black	Hisp.	
3	13	17	12	6	6	1	8	12	8	6	8	4	4	All Things Considered
2	11	18	14	7	6	1	8	12	9	7	6	3	3	Car Talk
3	14	13	14	6	3	2	10	12	7	4	12	25	5	Crossroads
10	10	23	14	3	9	6	6	5	8	3	5	5	4	Echoes
3	10	17	11	7	6	1	7	14	8	5	11	5	4	Fresh Air
6	16	15	9	5	4	4	6	11	10	3	11	57	2	JazzSet
2	4	5	10	9	14	1	3	7	12	14	20	4	1	Lyric Opera
4	14	17	13	6	4	1	9	11	10	4	7	4	4	Marketplace
3	13	18	12	6	5	2	9	13	9	5	7	5	3	Morning Edition
3	10	12	17	8	8	1	7	10	6	8	9	15	0	Press Club
3	12	17	14	4	5	2	8	17	6	7	5	5	3	Thistle & Shamrock
3	10	14	12	7	8	1	10	12	9	6	8	3	1	Whad'ya Know
3	30	13	4	1	1	3	21	18	5	0	1	2	1	World Cafe

HOW TO READ: Program affinity is easy to see when displayed on our standard appeal maps.

The Age/Sex Appeal map shows the median age of each program's audience and the percent that is male. The appeal of *Morning Edition* and weekday *All Things Considered* is at the cross-hairs — about 42 years old and 57 percent male. Several low-affinity programs are identified by their distance from this point: *World Cafe* is younger, *Chicago Lyric Opera* is older, and *Echoes* is two-thirds male.

The Age/Race Appeal map identifies two other low affinity programs. Although they have essentially the same median age and sex composition, *JazzSet* and *Crossroads* have significantly higher appeals to blacks.

Age/Sex Appeal of Select National Programs
All Things Considered and Morning Edition at Crosshairs

Age/Race Appeal of Select National Programs
All Things Considered and Morning Edition at Crosshairs

THE AFFINITY OF NATIONAL PROGRAMS
WITH WEEKDAY *ALL THINGS CONSIDERED*

High Affinity
.988 *Morning Edition*
.980 *Marketplace*
.978 *Car Talk*
.953 *Fresh Air*
.951 *BBC World Service*
.948 *Weekend Edition Sunday*
.934 *Whad'ya Know*
.920 *Thistle & Shamrock*
.915 *CBC Sunday Morning*
.907 *Weekend Edition Saturday*

Some Affinity
.896 *American Radio Company*
.888 *New Dimensions*
.876 *Weekend ATC Sunday*
.869 *Music from the Hearts of Space*
.854 *MacNeil-Lehrer Newshour*
.849 *Talk Of The Nation*
.825 *Mountain Stage*
.820 *As It Happens*
.810 *Weekend ATC Saturday*
.804 *Afropop Worldwide*
.791 *Rider's Radio Theater*
.771 *Monitor Radio Early Edition*
.746 *Music through the Night*
.707 *Living on Earth*

Low Affinity
.695 *Monitor Radio Daily Edition*
.690 *Echoes*
.687 *Millennium of Music*
.677 *Soundprint*
.662 *Performance Today*
.628 *Beethoven Satellite Network*
.615 *The World Cafe*
.604 *Pipedreams*
.602 *My Word*
.596 *St. Paul Sunday Morning*
.580 *Parents' Journal*
.577 *National Press Club*
.570 *Pacifica News*
.566 *Schickele Mix*
.560 *Weekend Radio from Cleveland*
.546 *Monitor Radio Weekend Edition*
.542 *Cleveland Orchestra*
.523 *Folk Sampler*
.501 *Chicago Symphony Orchestra*
.500 *Horizons*

No Affinity
.495 *St. Paul Chamber Orchestra*
.493 *Detroit Symphony*
.486 *Sound Money*
.486 *Radio Reader*
.442 *My Music*
.430 *City Club Forum*
.395 *Crossroads*
.390 *Lib. of Congress Classical Perf.*
.382 *St. Louis Symphony Orchestra*
.380 *Adventures in Good Music*
.379 *Record Shelf*
.372 *Concertgebouw Now*
.320 *Marian McPartland's Piano Jazz*
.317 *San Francisco Symphony*
.305 *Classical Countdown*
.295 *Vienna Festival*
.283 *Morning ProMusica*
.258 *Parkway Library Service*
.231 *Minnesota Symphony Orchestra*
.219 *Metropolitan Opera*
.213 *Bob and Bill*
.162 *Jazz After Hours*
.162 *BluesStage*
.143 *Chicago Lyric Opera*
.117 *Pittsburgh Symphony*
.112 *Spoleto Festival*
.008 *JazzSet*

How Do We Get the Most Reliable Picture of Programming Appeal and Affinity?

by David Giovannoni

A program, regardless of its appeal, does not have an audience until it has carriage.

—Tom Church, RRC

With the possible exception of NPR's daily news magazines, stations deliver more listeners to acquired programs than the programs deliver to stations. This two-way, interactive, symbiotic relationship raises an obvious question. "How can we determine a program's intrinsic appeal when each station's schedule exerts such a large influence on the program's audience?"

This is an excellent question — one that was probed deeply and answered convincingly before the first word in this series was written. Here we demonstrate how our analysis transcends local audience variations, and in doing so yields the most reliable appeal and affinity information so far available.

To review. Our guiding principle is that every minute of every program has an inherent appeal; some people want to hear the program, others don't. Our quest is to depict the appeals of a wide range of programs using Arbitron's age, sex, and race characteristics. Our goal is to determine which programs may work well together in a station's schedule, which programs will not, and ultimately which programs are appropriate or inappropriate candidates for carriage at certain types of stations.

Distilling the Natural Appeal

The content and presentation of any national program is essentially constant. For instance, *Car Talk* sounds the same no matter what station it's on, so it should have the same appeal in Provo as it does in Boston. But when we look at the local audience characteristics for this or any national program, we find variations that mask the program's inherent, intrinsic, or "natural" appeal.

Natural appeal is defined by the characteristics of people who would listen to a program if there were no impediments to listening. There are always impediments. The program may be broadcast when its intrinsic audience isn't using radio. It may be competing against programming on another station that the intrinsic audience prefers. Or it may be inconsistent with the appeal of other programming on the station, in which case many people who would naturally find it appealing may not use the station at all.

Appeal is a quality, not a quantity, so our concern lies with the composition of the audience for the program. Although the focus of presentation has been on the audience's median age and the percent that is male, appeal is actually calculated across 12 age/sex cells and a cell each for blacks and Hispanics.

Appeal indicates attraction. If a program appeals to a person, he or she will listen more than a person who finds the program not so appealing. For this reason we base the appeal calculation on the **amount of listening** done by persons of each type; not on the **number of listeners** of each type.

This dictates the use of AQH measures. We don't use cume because it counts every listener equally; the person who flows in from the previous program and listens for five minutes before tuning out counts as much as the person who makes a point to tune in the program and listen to every minute. AQH gets us closer to the natural appeal.

Washing Out Local Effecets

Our study of appeal combines listening data from all stations that carry each program. A criticism levelled against this method asserts that it doesn't control for local situations. But in fact, when ascertaining the appeal of national programs, aggregating data from many stations isn't simply desirable — it's necessary. The reason lies in the imperfection of our measurements.

All audience estimates are based on samples. The reliability of any estimate depends on the size of the sample upon which it's based. When we calculate a program's appeal we divide the sample into 14 audience composition cells. At most stations, Arbitron's single-quarter sample is simply too coarse to yield the precision our applications require. Any local analysis would be plagued by an inability to demonstrate statistically-meaningful conclusions.

We avoid these limitations by aggregating data across many stations in many situations. Only by amassing a sample of hundreds or thousands of diaries for any program is the sample able to yield reliably the information we seek.

The entire range of programming situations are included in this mix. Far from invalidating our results, this method washes out local variations. In statistics this is called "regression toward the mean." This jargon conveys a simple idea: the more stations and local situations one includes in the mix, the more apparent a program's natural appeal becomes.

Affinities

Once we distill our best estimate of the natural appeal for each program, how do we calculate affinities among programs?

Crossover analysis is the traditional way of assessing the affinity between two programs. (It answers the question, "How many of Program X's listeners also hear Program Y?") But two of its basic shortcomings keep us from using it. First, as previously discussed, it's a cume measure that counts all persons equally regardless of how much they listen. Second, it requires that both programs be available to the same set of potential listeners, thereby reducing reliability by further restricting the sample size.

AUDIENCE 88 transcended simplistic crossover analysis when it defined affinity as the correlation between two programs' appeals. This definition imparts many desirable traits to our analysis, the most important of which is that it allows us to subject our study to the discipline of parametric statistics.

Indeed, for this analysis we have refined AUDIENCE 88's method even further to bring the full weight of parametric statistics to bear on the problem.

The refined method offers two major advantages: it formally controls for the audience brought to the program by stations, and it allows us to place far greater faith in the results.

The disadvantage is that we lose some ability to compare levels of affinity between sets of programs. In fact, in an effort to maximize the surety of the results, our refined method reports only program combinations that possess significant aversion.

Although this method is significantly more complex than that employed by AUDIENCE 88, the results are simplicity itself. We can now present a matrix of programs against programs, programs against formats, or formats against formats, and indicate without equivocation the

intersections at which they work against each other in serving a consistent type of listener.

What does this suggest to APR and NPR about packaging their programs? What does this suggest to funders and producers considering various programming options for specific audiences or station cohorts? What does this mean for the programming decision-makers at stations?
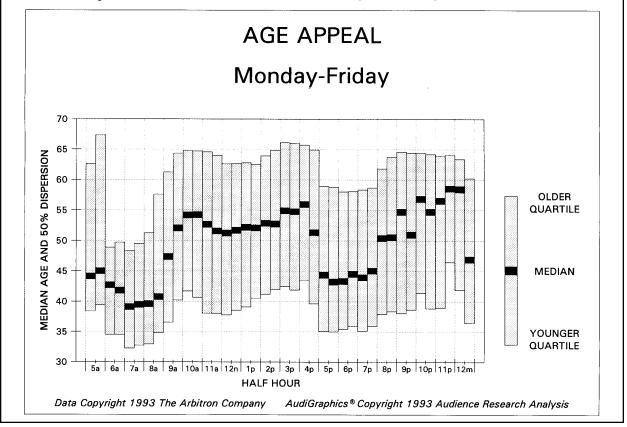
That's information that everyone can understand and use. Subsequent columns in this series will explore a range of applications.

Appeal works like a filter. No matter what audience is delivered to it, a program will encourage its intrinsic audience to listen while screening out others.

This graph tracks the age of listening across the weekday schedule of a public radio station. The audience is centered between 40 and 45 years of age during the morning news block. From 9:00 a.m. until 4:30 p.m. music serves an audience cen-

tered half a generation older. It's back around 45 for the news between 4:30 and 8:00 p.m. The evening music drives the age of the audience to its oldest peaks of the day.
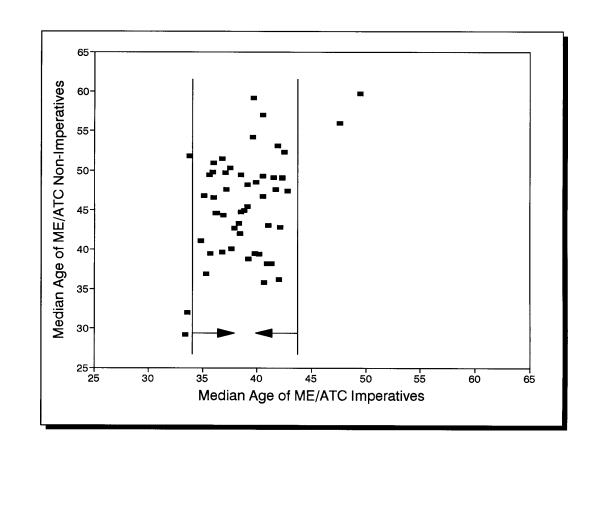
Other analyses (not shown here) show that these age changes are not caused by radio use getting younger or older at these times; appeal of the programming is clearly filtering out listeners or allowing them through.

AGE APPEAL

Monday-Friday

Data Copyright 1993 The Arbitron Company   AudiGraphics® Copyright 1993 Audience Research Analysis

This graph shows how the robust natural age appeal of *Morning Edition* and *All Things Considered* (*ME/ATC*) shows through local variations. Each dot marks the median age of listening to a station by *ME/ATC* imperatives (persons for whom these programs are essential to being in the station's cume) and *ME/ATC* non-imperatives (persons who would continue to listen to the station if *ME/ATC* were replaced). Only stations with the most reliable audience estimates are shown.

At first glance we see the obvious: when the audience brought to the programs by the station (non-imperatives) gets older, the audience brought to the station by the programs (imperatives) also gets older.

However, the median ages of listeners brought to the station by the programs have a much narrower age range (generally 35 to 44 years) than those of listeners brought to the programs by the stations (generally 30 to 55 years). Except in the most extreme cases, the median age of the program imperatives cluster within a few years of 40—the median age for all *ME/ATC* imperatives. The power of natural appeal shines through.

FUTURE RADIO NETWORKS:
STREAM WITH CONSISTENT APPEAL

by David Giovannoni

In the event that the issue of affinity raises its head while you're discussing the merits of your program to program directors, I want you to know how we at NPR are reacting to the columns. We are not reacting at all. We are not responding or rushing to counter or discredit Giovannoni's theories. (Let me emphasize the term "theories".) It is our opinion that you should not either.

—An NPR official's response to our columns on "appeal" and "affinity"

It's true that new and untested ideas warrant careful examination. But it's not true that the concepts of appeal, affinity, and aversion are new and untested ideas. Since their introduction five years ago by AUDIENCE 88, many public broadcasters have found them to be both useful and appropriate.

The ideas of appeal and affinity seem new to some — particularly persons not working at stations — because most of the explorations into these issues have been conducted locally. During the last five years research tools have been developed for station-based broadcasters that provide an intimate understanding of how programming and listeners interact; national-based broadcasters don't yet have the advantage of these tools.

The most noticeable omission has been the lack of appeal and affinity-based data on national programs outside of individual stations' schedules. This summer our columns have provided just a glimpse at some national data and a few hints at how they could be applied.

Like the concepts of responsibility to listeners, core and fringe, loyalty, modes, cohorts, and other "theories" that our work has engendered during the last few years, the constructs of *appeal*, *affinity*, and *aversion* can unquestionably enhance public radio's mission when appropriately employed. Here we sketch how public radio's national program producers and distributors might put these ideas to good use.

Networks

Networks were once radio's backbone and they're quickly becoming so again. Increasing fragmentation of radio itself brings smaller audiences to any particular station. So do greater levels of segmentation, targeting, and competition from other media. Smaller audiences in any single market encourage distribution to multiple markets. They also encourage efficiencies in program production and distribution.

The parsimony of pooling resources to make a program once and distribute it to many stations is what networks are all about. Unlike their commercial counterparts, public radio stations

have been reaping the rewards of strong network programming for the last two decades. But whether commercial or non-commercial, tomorrow's networks will be vastly different in nature from yesterday's and today's.

Radio networks of the past and present are much like broadcast television networks today. Programs selection and scheduling decisions are based primarily on factors that have little to do with audience appeal considerations.

Radio networks of the future will focus on serving a certain type of listener. They'll provide streams of programming selected to appeal to that listener. They'll schedule programs to coincide with the listeners's activities through the day and across the week. All program elements will have high affinity. Programs that don't serve this listener, no matter how good, will not be in the stream.

Why will network programming streams evolve along appeal-based lines?

- Many stations are already far ahead on this path. The network they choose will be the one that offers the programming stream that best serves their chosen audience.

- Future customers — outlets other than stations — are already organizing along appeal and affinity lines.

- The network that does it first will enjoy significant competitive advantages.

- The efficiencies realized by such a move will be too great to ignore.

This scenario offers good news, bad news, and a terrific opportunity for all public broadcasters. The good news is that public radio is generally already defined by an appeal that sets it apart from commercial radio. Its hallmarks of quality, depth, and intelligence arrayed across

its various offerings cause it to serve the most highly educated audience of any mass electronic communications medium. In the external context of commercial competition, our programming is unique.

But internally we are inconsistent. As previous columns have shown, more-than-subtle differences exist among the appeals of our national programs. Some serve younger persons while others serve older persons. Women prefer some while men prefer others. A few have high minority compositions while others don't.

Appeal Streams

What would happen if public radio's national program distributors sorted their programming into streams defined by appeal? All programs that appeal to a certain type of listener go into one programming stream; programs that appeal to another type of listener go in another stream, and so forth.

Herein lies a tremendous opportunity for networks. Programs aren't in short supply; intelligent placement of them is. The rewards for intelligent placement — at the right stations, in the right contexts, and at the right times — are immense.

Sorting just in the age and genre domains, we'd find streams that are more like torrents: classical music concert recreations with appeal centers above 50 years-old; news and information programs with appeal centers in the 40-50 year range.

We'd find other streams that are merely trickles — any nationally-available program appealing to persons younger than 40, for instance. (See sidebar.) We know that many stations entering the system this decade are currently programming to significantly younger audiences. Stations that operate in markets with other public stations are looking for ways

to differentiate themselves. Here is a wide-open field for program distributors and producers to define — intelligent information, entertainment, and music programming focused at least ten years younger than *Morning Edition*, *Prairie Home Companion*, or *The Met*.

Just imagine the efficiencies (and great programming) that could come about if producers could make multiple uses of the same material. Imagine Diane Rehm sitting down with a guest for an AARP *Prime Time Radio* interview. In one segment Diane asks questions of interest to retired persons; in a second segment she focuses on retirement issues for younger persons. Two programs with different targeted appeals emerge from a single interview. The second goes into the "network news as we now know it" stream; the first goes into the "network news for classical music listeners" stream.

The idea of "multi-versioning" NPR's news-gathering resources into *ATC-35* (appeal centered at 35 years of age), *ATC-45* (the current version, perhaps more sharply focused), and *ATC-55* (for classical music listeners) is one that can offer tremendous economies for the network, as well as large pay-offs for public radio stations and the system in total.

Sort First, Invent Later

Imagining these future scenarios helps us anticipate future developments. But we shouldn't lose sight of what can be done today, because it can be done at virtually no expense. The first step is for distributors to sort the many quality programs already at their disposal into programming streams that are focused on types of stations serving specific types of listeners.

Imagine satellite channels assembled by audience appeal. Imagine getting *Car Talk* in the same programming stream as *Morning Edition*! Imagine a marketer suggesting that one of her network's programs is inappropriate for a station and should be taken off its air!!!
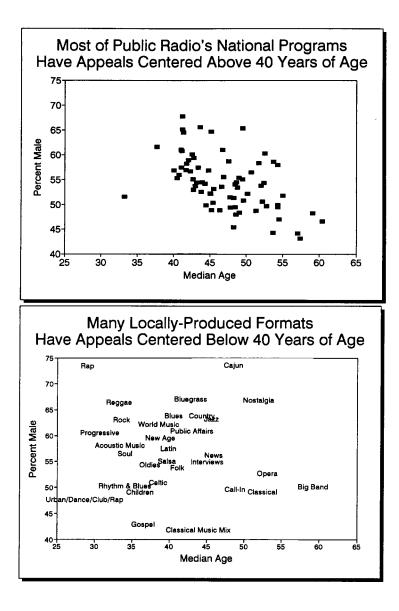
Will these things that make so much sense from an audience service perspective ever happen? Will networks overcome their organizational inertia and adapt? Can money be found or reallocated to establish these streams? Will stations carry them?

Today's public radio networks still operate in the genre-focused, producer-driven program mode. To compete in tomorrow's environment they'll need to shift into the audience-focused, appeal-driven programming mode. Many stations are much farther ahead on this path.

Networks will have to catch up before they can lead.

When overlaid, these two graphs indicate great possibilities for networks and national programmers thinking audience-defined, appeal-based thoughts.

Almost all of public radio's major national programs have appeals centered above 40 years of age. *World Cafe* and *Pacifica News* are the only programs younger than 40, at 34 and 38 years of age respectively.

Many locally-produced formats are younger than this, and are found primarily on stations that have yet to enter the system. Perhaps many won't survive their stations' transitions into the system. However, a younger audience target is evident among certain station cohorts, and most national programs are currently too old in their appeal to serve these stations well.

Most of Public Radio's National Programs Have Appeals Centered Above 40 Years of Age

Many Locally-Produced Formats Have Appeals Centered Below 40 Years of Age

COMING SOON:
DO-IT-YOURSELF 'SHARENETS'
BASED ON APPEAL

by David Giovannoni

We are in great haste to construct a magnetic telegraph from Maine to Texas; but Maine and Texas, it may be, have nothing important to communicate.

- Henry David Thoreau, Walden

National producers supply some of public radio's best programming. But they don't supply all of it. A few stations are producing programs of national caliber that simply aren't heard outside of their coverage area. The best of these programs rival or surpass their nationally-available counterparts.

Last time we examined how NPR and APR — public radio's "bignets" — might sort their programming to better compete in the evolving media environment. Here we turn our attention to public radio stations and how their best local programming might also compete in this environment.

Great economies can arise when stations band together and do for themselves what bignets do. I call these "sharenets" — decentralized networks of stations sharing local programming. Like the bignets, participants in sharenets need only to sort through their existing programming to create streams that are bigger than the sum of their parts. Streams that focus on the interests of a single type of person will be ready to compete in the noisy communications environment of tomorrow at a price that looks very affordable today.

Why Sharenets, Why Now?

Public radio's interconnection system has made it possible for us to share high quality audio with hundreds of other stations in our hemisphere. The system works well; and while costs have kept many from taking full advantage of its potential, this is changing rapidly. Signal compression technology is using bandwidth more efficiently; other satellite vendors are introducing alternative distribution options; buying large blocks of satellite time and foregoing certain services can lower distribution prices even further.

We are now at the point where barriers to entry are so low that networking can become a "do-it-yourself" proposition. For the cost of employing a full time staff person, a station can beam its signal to every other station on the continent 24 hours a day, 365 days each year.

Why limit the use of a satellite channel to just one station? What if a consortium of stations got together to "do-it-with-friends" instead of doing it themselves? What if station A uplinked its best program, followed by Station B's best program, and so forth throughout the day and night? Even better, what if these stations comprised a "strategic cohort" serving similar types of listeners with similar types of programming? (See the PUBLIC RADIO PROGRAMMING STRATEGIES study for an extended examination of strategic cohorts.)

The term "sharenet" captures this idea of networking and merges it with the notion of

shareware. Shareware is a computer program created by a person for personal use that is then distributed for the use of others. The author may or may not ask for a minimal payment. The program has already been produced, debugged, and tested; it works; why not share it?

Substitute "radio program" for "computer program" and you've got the sharenet concept. This isn't meant to imply a naive hippy-free-tools idealism; obviously business acumen will be required to set up the partnerships, joint ventures, or other forms of financial and operational commitments. But rather than jockeying for power to influence programming decisions at the bignets, sharenet partners can concentrate their efforts on serving listeners with the best product they can produce. What a concept.

Consortia of stations operating as sharenets could create any number of new programming streams. What might these streams be? If defined by genre alone or assembled as programs became available, the consortium will have succeeded in reinventing NPR's and APR's program streams. But if each stream were aimed to serve a specific type of person, and programs were lined up to serve this listener through the day and across the week, the consortium will have created public radio's first appeal-based network.

The previous column discussed the advantages that appeal-focused networks will have in the future. Sharenets are a logical extension of this discussion. The difference is that sharenets need not be located in a single building or city like Washington or Minneapolis. Today's technologies essentially eliminate location as a variable. As program and audience research have found repeatedly, what counts is what comes out of a listener's radio — not what city it's produced in.

Whether Maine has something to say to Texas is no longer the right question. Our ability to communicate electronically has overcome geographic bounds. "Interest" has always been the locus around which communication occurs, and today more than ever interest is the key. Audience and programming research done at stations tells us that interest transcends geography.

To whom are we programming and what are their interests? *That's* the question to ask when investigating program appeal and establishing program streams with high internal affinity.

If Maine has a program that appeals to older classical music listeners, it will be well-received by older classical music listeners in Texas. If Modal Music serves network news listeners in Denver, it will serve network news listeners elsewhere. If an interview program can maintain the *Morning Edition* audience in Washington, it will do the same in Boston, or Chicago, or San Francisco, or Seattle, or Shreveport, or yes, even Dallas and Portland ME.
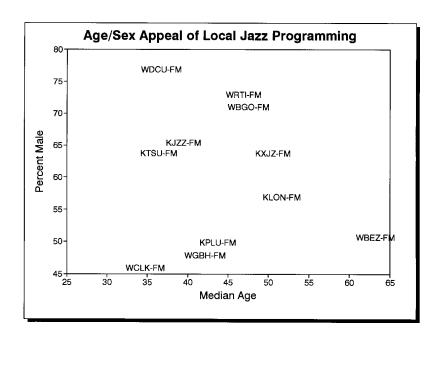
Will sharenets erode the power of public radio's bignets? Sharenets promise to public radio what personal computers have delivered to the computer industry. They'll make some very useful programs available at a fraction of the cost of producing them yourself.

Sure, sometimes you need a mainframe, and the need for mainframe programs like *All Things Considered* will remain. But with the power and cost effectiveness that sharenets offer, the solution to every programming problem may no longer demand millions of dollars and hundreds of stations to support. The days of clearing a program on more than 100 public stations are numbered. By thinking small and working smart, sharenets can be economically viable with a half-dozen stations, maybe fewer.

There's little in the sharenet concept that visionaries such as Sam Holt and Bill Siemering weren't writing about 15-20 or more years ago. What's new is that interconnection fees are becoming affordable for this type of use; our understanding of programming appeal and affinities helps us select from a myriad of quality programs; and the increasingly crowded media environment demands that we look for new programming paradigms.

A few thousand bucks each, some cooperation and coordination, and a clear focus on their programs' appeals and affinities: that's all it will take for a few stations to leapfrog the bignets in select programming areas. Cooperation and technology make sharenets economically feasible; focus on appeal and affinity make them national — perhaps international — contenders.

POSSIBLE SHARENETS

The natural response to the sharenet concept would be to create sharenets based on genres such as jazz, classical, cultural, or interview programs. A much more powerful coalition would define itself in terms of appeal as well as genre. It would network a type of programming for a type of person.

- Interview programming for national news listeners.
- Classical music for national news listeners.
- Classical music for people who like Karl Haas and opera.
- Jazz for national news listeners.
- Jazz for older white guys.
- Jazz for black listeners.

Age/Sex Appeal of Local Jazz Programming

A scatter plot with Median Age on the x-axis (ranging from 25 to 65) and Percent Male on the y-axis (ranging from 45 to 80), showing the following radio stations:

- WDCU-FM (approx. 35, 76)
- WRTI-FM (approx. 45, 72)
- WBGO-FM (approx. 45, 71)
- KJZZ-FM (approx. 37, 65)
- KTSU-FM (approx. 35, 64)
- KXJZ-FM (approx. 48, 64)
- KLON-FM (approx. 50, 57)
- KPLU-FM (approx. 40, 50)
- WBEZ-FM (approx. 63, 50)
- WGBH-FM (approx. 40, 48)
- WCLK-FM (approx. 32, 46)

The PUBLIC RADIO PROGRAMMING STRATEGIES study identified a coalescing cohort of stations interested in jazz. A sharenet might help make available the critical programming mass. But attention to appeal is paramount.

To whom does jazz appeal? The appeal maps show the characteristics of audiences currently served by local jazz programming on several of public radio's flagship jazz stations. More than a half-dozen different appeals are apparent across eleven stations.
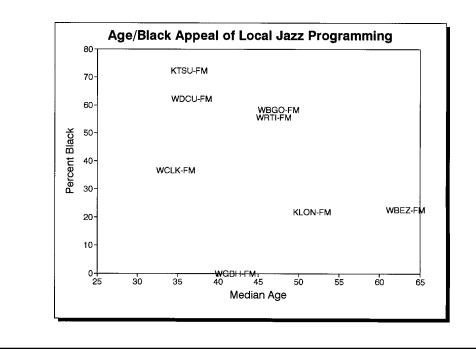
- There's the predominantly young, male, and black appeal of WDCU in Washington DC and KTSU in Houston.

- WBGO in the New York market and WRTI in Philadelphia serve black men also, but their appeal is centered ten years older.

- The jazz produced by KPLU and WGBH has a relatively even mix of white men and women centered in the 40-45 year-old range.

- The Hispanic California population is reflected in the appeal of KLON in Los Angeles and KXJZ in Sacramento; the appeal of these stations' jazz is primarily to older white men.

Neither KLON nor KXJZ serves as old an audience with jazz as does WBEZ. Indeed, each of the remaining stations is different enough from all others to indicate some significant difference in appeal.

Clearly, the assumption that jazz stations serve the same types of listeners simply isn't true. Public radio's local jazz programming is so disparate in its appeal that a single jazz sharenet (or national jazz programming stream) will not fit all. Attention must be paid to the programming's appeals to blacks and whites, younger and older persons, women and men.

This doesn't mean that jazz-based sharenets aren't possible. Quite the contrary. Two or three stations with high affinity jazz programming stand to benefit from each other's efforts; indeed, their shared programming may make jazz services possible on stations that just don't have

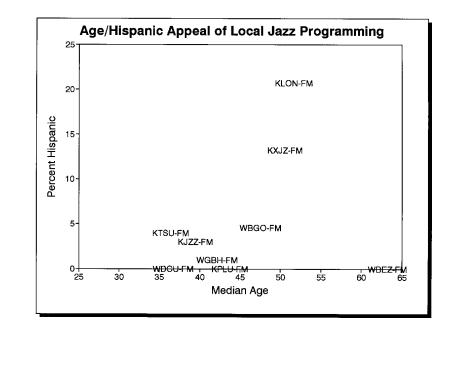

Age/Black Appeal of Local Jazz Programming

the resources to produce them on their own. Keeping down costs is the key.

Here's another possibility that will not require a lot of stations to have a major impact. Right now several stations produce daily interview and/or call-in programs that serve their NPR news listeners better than any comparable national program. In many instances staff and on-air talent have developed and matured thanks to years of nurture by their stations.

A number of stations—many in major markets—are on the verge of replacing the last vestiges of midday music with information programming. The problem facing all of them is a paucity of appropriate programming. Many don't have the resources to produce programming of the high calibre they seek, and their bignets don't provide any coherent programming stream with demonstrated appeal to national news listeners.

What we have here is a classic case of supply and demand. What we don't have—yet—is the sharenet that confederates the two. It's up to interested parties to make the connections. It seems so close.... "interviews for NPR news listeners" may well be public radio's first sharenet.

Age/Hispanic Appeal of Local Jazz Programming

SEIZE THE OCCASION:
IT'S YOUR CHANCE, 20 TIMES A WEEK

by David Giovannoni

An occasion is a terrible thing to waste.
— Eric Hammer

Ponder this for a minute. When a person turns on the radio and decides on a station, how is this decision made? What goes through the person's mind as he or she reaches first for the on button and then the station selector?

At this critical instant your station vies with other well-known suitors seeking to serve the listener. This courtship happens 20 times per week on average, and it's the cold, hard test of how well your service suits your listener. Six times out of 20 your proposition is embraced; the other 14 you're rebuffed.

The listener's choice upon tune-in is called an *occasion*. The occasion is the point at which a person chooses one station to the exclusion of all others. Those who strive to serve significant audiences with programming of significance must be there for the listener when the listener is there for you. This means programming for the occasion.

Our study of appeal has much to say about programming for the occasion. Here we sketch the circumstances under which these 20 occasions occur. And we apply the tenets of appeal to explore how public broadcasters might take advantage of this knowledge to add to the 6 occasions now given to us. It's at this critical decision-making point — and primarily at this point — that programmers can exert the greatest influence over listening.

Changing the Station

Let's begin with the 3 times per week that listeners change stations. The radio is on and something happens that causes the listener to reach over and switch to another station. What could that something be?

The listener knows something better is on and tunes it in. This usually happens when a personality or program comes on the air. At 11:00 G. Gordon Liddy begins his transmission; at noon Paul Harvey does his shtick as does Rush Limbaugh thereafter; at 5:00 *All Things Considered* commences; on Saturday afternoon *The Met* is heard; and so forth.

By definition, the program being tuned to has some affinity with that being tuned out (because they attract the same listener). More important, the other program has greater power. It's a stronger magnet for this listener. [See the sidebar on *Appeal and Power*.] If yours is the station being left, the only way to maintain this listener is to increase the power of your programming by at least matching the power of the competition. This can be difficult when confronted with superstar competitors.

Fortunately listeners flow both ways, and public radio has some very powerful programs of its own. A great example is *All Things Considered* — the magnet that pulls listeners away from the music stations they've been listening to through the afternoon.

The station changes its appeal and forces the listener away. This problem is painfully prevalent in public radio. It's particularly evident among stations with multiple formats with low affinity, but it's certainly not limited to them. *Morning Edition* ends and classical music begins; jazz ends and the afternoon news block begins; *Weekend Edition* ends and *The Met* begins; Keillor says goodbye and a folk music show begins.

Where two adjacent programs have different appeals (that is, serve different kinds of listeners), the station causes listeners to tune away and seek programming that better matches their mood or reason for listening. This may or may not be the case with the examples cited above. You can probably look within your own schedule and find better examples. This is a much easier problem to fix than the previous situation, because in this case your own schedule is the problem, and you can fix it by exercising control over it.

The station maintains appeal but the power of the appeal weakens. This is often the case during classical programming when another station in the market is also classical. In focus groups listeners tell us that they'll listen to one station until they hear a piece they don't like much (i.e. the power drops) at which point they'll check out what the other station is doing.

We also see this with news and information programs. Many national programs have high affinity with *All Things Considered*, for instance, but few approach its power.

Your service can also lose power when a program repeats. *Morning Edition* is as powerful at 8:10 as it is at 6:10 for a listener hearing a segment for the first time; but power is greatly reduced for a listener who's already heard that segment. This is one reason why *Morning Edition* loses power as the morning progresses; the trade-off is that it retains power for other listeners.

Even in its weakened state a rollover may be more powerful than the programming available to displace it. Intelligent programming decisions hinge on this balance. In weighing all programming options, a station will do best by its listeners by airing the most powerful programming available.

The reasons why people change stations are the ones on which many "audience building" discussions focused in the mid-1980s. The seamlessness strategy and the "never say goodbye" tactic addressed the effort to keep people listening by giving them no reason to tune out. But these maneuvers influence only 3 of 20 listener occasions. More powerful is the strategy of airing the most powerful programming available while maintaining the station's overall appeal. This not only maintains the listener who may otherwise change stations, it also leverages your ability to make your service a more viable option for the listener the other 17 times.

Warm Occasions

The 17 times each week your listeners turn on their radios can be divided into two types of occasions: warm and cold.

A *warm occasion* happens when a person is listening to the radio, changes location, and continues listening to the radio in the new location. Public radio listeners do this an average of 3 times each week. Leaving the house and getting into the car; leaving the car and going to work; leaving work and putting on the Walkman; each is an example of a warm tune-in.

On one hand, warm occasions offer great opportunity to the station that's just been turned off. It's still ringing in the listener's ears, and he or she is likely to continue listening to it at the new location. On the other hand, a change of venue encourages a change of station. In

fact, your listeners change the station just as often as they stay with a station during a warm occasion.

There are two ways you can encourage the warm tune-in-er to remain with your station. First, maintain the tactics outlined above. A warm occasion to a different station is a venue-induced change of station, and as such the change of station tactics apply.

Second, be mindful of the locations at which your listeners are using radio throughout the day and program accordingly. A program's power is diminished if it doesn't meet the needs that listeners go to their radios to satisfy, and needs can change by location. If midday programming demands attention it may not be very powerful for people at work (but it may be wonderful for people seeking intellectual stimulation in their cars or at home). If a morning program ignores weather and traffic it may not be very powerful for people planning their day and route to work (but it may be wonderful for people using it to extend their dreams).

People ask and expect different things of the radio depending on the time of day and their situations. Their location of listening has much to say about their situation, and by programming accordingly you'll have a significant influence on their warm occasions.

Cold Occasions

A *cold occasion* happens when a person who hasn't listened to the radio in the last 15 minutes turns one on. Fourteen out of 20 occasions — 70% — start this way among public radio's listeners; therefore strategies that bring cold occasion-ers to public radio offer more than twice the potential influence of all station-changing strategies combined.

While the cold occasion can be influenced by

many of the station-changing micro-tactics, it is most directly influenced by large-scale scheduling tactics that focus on maintaining a station's appeal across large dayparts across the week. What this means is that through the day, everyday, the station strives to serve the same listener; it's there for the listener when the listener is there for it. If your *Morning Edition* listener tunes in cold to your midday or evening programming, hears something that doesn't appeal to him or her, then tunes away to another station, your station simply isn't providing a service to that listener.

As we've said many times before, this doesn't necessitate adopting a single format or genre all of the time. Listeners appreciate formatic variety, and they're willing to support stations that have it. But they have to *listen across this variety,* and that means the various program elements must have very high affinity with each other.

There's nothing like powerful programming to make a listener grab the radio and tune in your station. There's nothing like consistency in appeal across all programming to bring a listener to your station time and time again.

Critics chide that consistency is the hobgoblin of small minds. While this may be an amusingly derisive comment about accountants, it displays a total lack of understanding about how programming, programmers, and producers serve listeners. Public radio has some of the best of all three in the business. But we don't serve people when they're listening to something else.

Inattention to appeal wastes the occasion. It reduces your public service by rebuking people who want to hear the best public radio can offer. As responsible public servants we should address this neglect where it occurs.

APPEAL AND POWER

Appeal describes *who* will listen, but it doesn't indicate *how many* will listen. This is where power comes in. A program's **power** is its ability to reach out to listeners and draw them to the station. Power signifies strength. Two programs of the same type may appeal to the same kinds of listeners; but the one that attracts and serves more people per minute has more power.

Programming is the magnet that draws listeners to a station. The qualities of these listeners constitute the magnet's appeal (it will pull some types of people and repel others). The strength of the magnetic force itself is the programming's power. Power isn't a word you'll find in the Arbitron book, but its effects are apparent in statistics that report audience size and/or maintenance. Assorted statistics reflect its various facets: cume rating indicates the power with which a station reaches into the population; share shows the strength with which it competes in the market; and loyalty is its ability to serve its own cume.

When it comes to serving significant audiences with programming of significance, appeal and power work together to do the heavy lifting for program decision-makers. It's not enough to count the listeners to a program and focus on its power; nor is it enough to assess who these listeners are and focus on their traits. Programmers need both sides of the programming-listener equation—power and appeal—to make informed decisions about actual and potential audience service.

Public radio listeners decide what station to listen to 20 times per week. These 20 occasions break down as follows.

- 14 times they turn on the radio from a cold start.

- 3 times they change radio listening venues; that is, they're listening in one location, turn a radio off when they leave that location, and within 15 minutes turn a radio on at a new location. Half of the time they tune back in to the same station at the new location; the other half they change it.

- 3 times they change the station without changing venues.

From an analysis of Arbitron data of public radio listeners conducted for this report.

APPENDIX
CALCULATING AFFINITIES

The following technical description outlines the method used in our analyses.

Controls and Safeguards

The method used to calculate affinities among programs and formats incorporates a series of safeguards and controls that yield reliable, valid, and highly conservative results.

NPR tracks more than 300 different programs and formats each sweep. Only those meeting the following criteria are included in the analysis.

A. Each program must be carried by at least 20 stations and account for at least one-half of one percent of all national listening. In addition to filtering out programs and formats that aren't so widespread, the 20-station rule ensures that the program or format is heard in a variety of programming situations.

B. To ensure an adequate reading across the 14 audience composition cells, the program or format must be mentioned in at least 100 diaries.

Using Spring 1992 audience data assembled by the RRC and carriage data gathered by NPR, 58 national programs and 24 local formats pass these tests.

We used AUDIENCE 88's definition of affinity as the correlation coefficient (r) between sets of program appeal cells. The correlation coefficient takes on a value between positive one (perfect affinity across the age/sex/race characteristics) and negative one (perfect aversion) with values close to zero interpreted as neither affinity nor aversion.

The Effects of Situation

At this point the obvious question arises. How can we determine a program's appeal when its audience is influenced by the stations carrying it?

This question guided intensive investigation into the relationships between a program's situation and its intrinsic appeal. It was resolved using formal statistical tests: while situation does indeed influence a program's audience, the intrinsic appeal transcends local audience variations. With enough intrinsic appeal showing through the estimates, I felt comfortable calculating affinity estimates. To be sure, all of these estimates had great face validity.

Although many of the questions raised by concerned public broadcasters were legitimate, they were uninformed by the rigor of analysis that sustained the claims and supported the data in the first two columns. They did, however, cause me to explore and develop a method even more rigorous than the first.

A Refined Method

Even though I was convinced of the validity of the AUDIENCE 88 method, I wondered whether the full weight of parametric statistics could be brought to bear on the problem. Could we formally control for the audience brought to the program by the station? And what would the results be?

Lengthy investigation and experimentation have advanced the original AUDIENCE 88 method to an even higher level. The refined method offers two major advantages: it formally controls for the audience brought to the

program by the station; and, because of statistical safeguards, it allows us to place far greater faith in the results. The disadvantage is that we lose some ability to compare levels of affinity between sets of programs. In fact, in an effort to maximize the surety of the results, our refined method reports only program combinations that possess significant aversion.

More Controls and Safeguards

The previous method defined affinity as the correlation coefficient between the audience composition cells for Program X (X) and Program Y (Y) (r_{XY}). This is called a zero-order correlation. The new method redefines affinity as $r_{XY \cdot C}$ — the first-order correlation coefficient for X and Y controlling for C, the audience brought to the programs across their various carriage situations.

Conservative safeguards make this even tighter than the statistical control implies. Here are the decision rules (safeguards A and B remain in effect).

C. A formal statistical test determines the significance of $r_{XY \cdot C}$. If the chances exceed one in one-thousand that it is not statistically different from zero, it is not reported.

D. Even if it passes the statistical significance test, it must also pass the practical significance test of $|r_{XY \cdot C}| > .32$ (or $r^2_{XY \cdot C} > .1$).

I explored four measures of C: the weekly cumes of the stations carrying the set of programs; full-week listening to carrying stations; full-week listening to all radio by the stations' weekly cumes; and listening to all radio by the stations' weekly cumes during the times the programs were broadcast.

I chose the latter on three grounds. First, experimentation proved it has good statistical power. Second, it's the most conceptually accurate measure. The audience the station brings to any program is best defined by the people in its weekly cume who are listening to radio when the program is on. Obviously we don't want to look outside of the station's cume; and if we were to look outside of the times when the programs are available, we'd introduce time-of-day and day-of-week errors — the third reason for choosing this measure.

Although this definition of C is the closest to the concept, by definition it includes the audience listening to the programs themselves. This opens up the possibility of multicollinearity in $r_{XY \cdot C}$ — a violation of the statistical assumptions and their tests for significance. The method controls for it in these ways.

E. The method assumes multicollinearity if either $r^2_{XC} > .7$ or $r^2_{YC} > .7$.

F. A common indicator of multicollinearity is a difference in signs between r_{XY} and $r_{XY \cdot C}$. If multicollinearity is indicated in step E, and if the sign of the correlation coefficient changes when controlling for C, $r_{XY \cdot C}$ is not reported unless condition G is met.

G. If multicollinearity is indicated and a sign difference is manifest, then $r_{XY \cdot C}$ is reported only if its magnitude exceeds .5 — a demanding test of practical significance on top the test for statistical significance.

H. Even with these rigorous tests and safeguards, the possibility remains that positive affinity scores can mislead. Our knowledge is imperfect because $r_{XY \cdot C}$ is calculated over age/sex/race only. We're unable to rule out the possibility that some other trait, such as education, is also inherent in at least one of the two appeals. Fortunately, once aversion is demonstrated, we know that it truly exists. Therefore, only aversion scores ($r_{XY \cdot C} < 0$) meeting all of the above criteria are reported.