



The rate at which new members join is the sum of New Members from Advertising and New Members from Word of Mouth. The relationship between membership and advertising tends to be linear. The relationship between membership and word-of-mouth, however, is not linear and, consequently, a lot more interesting.

Recall that by advertising, I mean any kind of one-to-many communication initiated by you, the community host. In contrast, word-of-mouth means one-to-one referrals initiated by an existing member—not you.

To underscore the obvious, since members make referrals, the rate of referrals is a function of the number of Active Members. Here's how that is reflected in the model. An increase in Active Members or an increase in the average Referral Rate causes an increase in Referrals per month.

Here's the Referrals formula: the number of Active Members times the average Referral Rate measured in referrals per member per year divided by 12 months per year equals Referrals per month. I like to do a units check on equations to make sure I'm not missing a variable. In this instance, everything looks good.

If you think about it, the Referral Rate is a function of how often an Active Member—on average—interacts with a prospective member as well as how often such interactions result in the Active Member saying something positive about membership in your community.

Of course, not every referral is effective. So, I've added a Persuasion Fraction variable denoted as the fraction of members per referral that result in a new membership—the referral success rate if you will.

Now we can define New Members from Word of Mouth in members per month as the product of Referrals per month times the Persuasion Fraction in members per referral. Again, a quick units check confirms that we've not missed a variable in our formula.

Notice that there is a feedback loop associated with word-of-mouth. That is, an increase in the number of Active Members causes an increase in Referrals per month. An increase in Referrals causes an increase in New Members from Word of Mouth per month. An increase in New Members from Word of Mouth causes an increase in the Joining rate, and an increase in Joining causes an increase in Active Members.

This kind of feedback is known as a reinforcing cycle, which is denoted by the R symbol. When you see a reinforcing cycle, there is the possibility of exponential growth in the level of the stock—Active Members in this case.

At this point, our model reflects the assumption that there are five New Members from Advertising each month. However, there are zero Referrals per Month, so there are no New Members from Word of Mouth yet. Consequently, the number of Active Members at the end of 60 months is simply five members per month times 60 months, which equals 300 members.

Next time, we'll explore the potentially significant impact of the reinforcing relationship among Referrals, New Members from Word of Mouth, and Active Members.