Archie Comics #600 and the Choice Between Marriage Candidates[*]

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Abstract

We present a simple model motivated by the events in Archie Comics #600 (May, 2009). We demonstrate that under a simple set of assumptions, Archie is better off extending a marriage proposal to Veronica rather than Betty.

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1 Introduction

In May of 2009, Archie Comics #600 was released. This served as a watershed moment for the comment as, after 68 years of waffling between love interests, Archie Andrews finally proposed to Veronica Lodge. His proposal was accepted with a resounding (i.e., all capital letters) "YES", followed by tears from former and on again/off again girlfriend Betty Cooper and frustration from Archie fans around the world.

Betty Cooper, in any ways, represents the all American girl: fair-haired, beautiful. Hell, she's even a cheer leader. She was the one who most people saw spending her life with Archie. Raven-haired Veronica, on the other hand, is the spoiled, arrogant (and smoking hot) foil to Betty. She represented in many ways all that is wrong with contemporary American culture: greed, ambivalence to the plight of others, narcissism. As such, the Blogosphere burst with criticisms of Archie and expressions of despair for what his proposal forebode for the state of contemporary American society.

In this paper, we present a simple model of a binary marriage choice with risk of divorce. We show that Archie's proposal to Veronica was optimal give the prevailing choice set. For simplicity, we ignore the presence of Cherry Blossom, who is clearly and always the optimal choice under any set of assumptions.

2 The Model

To begin, let $\theta \in \{B, V\}$ represent marriage candidates where $\theta = B$ and $\theta = V$ denote Betty and Veronica. Let u_t^θ represent Archie's returns from marriage to candidate θ in period t where marriage takes place in period $t = 0$. We assume that Archie is uncertain regarding the longevity and success of his marriage to either candidate. Let $\phi^\theta \in (0, 1)$ denote the probability of divorce, which we assume to be stationary over time. Finally, let D^θ denote the cost of divorce from candidate θ.

As such, Archie's choice to marry Veronica is utility maximizing if

$$\sum_{t=0}^{T} \delta^t \left((1 - \phi^V) u_t^V + \phi^V D^V \right) \geq \sum_{t=0}^{T} \delta^t \left((1 - \phi^B) u_t^B + \phi^B D^B \right), \tag{1}$$

where $\delta \in (0, 1)$ is Archie's inter-temporal discount rate, we have ruled out the possibility of remarriage and (although love is timeless and contrary to the Archie Comics'

publication evidence) we have assumed Archie's life is of finite duration T.[1]

We make several assumptions regarding parameter values.

Assumption 1 *Given Archie's ability to constantly screw up, $\phi^V = \phi^B$.*

This assumption is relatively uncontroversial to any reader of Archie comics. Archie could screw up any relationship with equal probability given his seeming myopia and temptation to the advice from Jugghead.

Assumption 2 *Given the gazillions of dollars Veronica has accrued through the Lodge estate and her seemingly inability to exhaust her budget, $u_t^V > u_t^B > 0 \quad \forall t$.*

Readers of there comic will have noticed Veronica's inability to consume on the boundary of her budget set as, given Mr. Lodge's apparent financial empire, her budget set appears to be unbounded.[2] From Archie's perspective, while money can't buy love, it can rent a while lot making the instantaneous utility from marriage to Veronica greater than that from Betty.

Assumption 3 *Given the apparent love of readers for Betty's wholesome all-American-ness relative to Veronica's spoiled child behavior, $D^V < D^B$.*

Upon Archie's proposal to Veronica, message boards (especially archiecomincs.com) lit up with expressions of love for Betty. It is therefore relatively innocuous to assume the costs of divorcing Betty are higher than those of divorcing Veronica. Divorcing Betty involves breaking the all-American girl's heart through infidelity, excessive

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[1]This could also be modeled as a hazard function where $f^\theta(t)$ and $F^\theta(t)$ denote the probability density and cumulative distribution function regarding the probability of divorce from candidate θ. Then $h^\theta(t)$ is the hazard function of the marriage ending in period t, which is related to the other functions as follows:
$$f^\theta(t) = h^\theta(t)[1 - F^\theta(t)].$$
Given this formulation, Archie is better off marrying Veronica if
$$\int_0^T e^{-\delta t} u_t^V \left(\frac{1 - F^V(t)}{1 - F^V(0)} \right) - D^V \left(\frac{F^V(t) - F^V(0)}{1 - F^V(0)} \right) dt \geq$$
$$\int_0^T e^{-\delta t} u_t^B \left(\frac{1 - F^B(t)}{1 - F^B(0)} \right) - D^B \left(\frac{F^B(t) - F^B(0)}{1 - F^V(0)} \right) dt.$$
However, such mathematical legwork hardly seems worth the effort given the current line of inquiry.

[2]This poses some problems for the Veronica's optimal choice behavior in terms of consumption. We leave this as the subject of future research.

time spent engaged in Jugghead's antics, or other basic form of stupidity.[3] Divorcing Veronica means losing some material well being (see Assumption 2) but is not accompanied by the derision accompanying making Betty cry. Moreover, Veronica likely requires less alimony support than Betty in the event of a divorce, although this would depend on the parameter values in an extended model wherein Veronica's need for revenge is endogenized.

Given these parameters, we have the following:

Theorem 1 *If Assumptions 1, 2, and 3 are satisfied, Equation 1 holds and Archie's best choice was to marry Veronica.*

Note our analysis ignores the possibility of remarriage to candidate θ after divorce from candidate $\theta' \neq \theta$. Including remarriage would only strengthen our main result. We have also excluded any returns or cost of children. This is, after all, Archie Comics, not Big Brother.

3   Conclusion

Although there was extensive vitriol regarding Archie's choice to propose to Veronica, we believe that this is largely a result of a misunderstanding regarding the costs and benefits associated with marriage to either Betty or Veronica. We hope that our analysis assuages the apparent anger of Archie readers, an anger that should be unabashedly reserved for Reggie's antics. As mentioned in our introduction, our results may not hold if with the introduction of Cherry Blossom as a possible marriage candidate.

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[3]It is worth noting that although we observe no end of bonehead behavior in comics such as Andy Capp, Lockhorns, and Blondie, we see no talk of divorce.