Darwin’s Finches, 20\textsuperscript{th} Century Business, and APIs

Evolve Your Business Model

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#EvolveAPI
DARWIN’S FINCHES
These birds
live in this paradise right here
so what’s the problem?
The problem is
they’re on a small island chain
a long way from anywhere else
that’s a lot of environmental pressure
so these finches
are actually terrific competitors
and their differences
were defined by this man
as successful adaptations.
The ones you don’t see today
had unsuccessful adaptations
and died out.
A century after
a team of scientists identified the mechanism of adaptation and evolution
Twenty years later
called out the gene as the atomic unit of competition.
From the perspective of the gene
the gene is successful
if the organism that carries it is successful.
Switching gears
20th CENTURY BUSINESS
In 1910 business was mostly direct
W. GREENBLATT
FURRER
SCHWARTZ BROS
WAISTS
SCHWARTZ & SCHWARTZ
COATS
By the 1930s there was a lot of competition
But after World War II, there were new environmental pressures
Many businesses died out.
Business went from **direct** to **indirect**.
Those businesses who **thrived** in this transition
Shared a set of successful adaptations
Special makes for select retailers

Broad consumer marketing and branding

Distribution exclusives in territory and product allocation

Retailer incentives – slotting fees, joint marketing, tiered volume discounts

Consumer incentives – coupons, in-store events, limited time discounts
Unified by one idea
It was not just about **selling in**
It was not just about selling in
It was about selling through.
From the perspective of the **business**
The **business** is successful
If the **retailer** that it sells through is successful.
The real world went from **direct** to **indirect**
It went beyond the corner store.
The web world is going from direct to indirect.
It is going beyond the browser.
That takes us to
APIs
“Web 1994 was the “get me a domain and a page” era. Web 2000 was the “make my page(s) interactive and put people on it” era. Web 2010 is the “get rid of pages and glue APIs and people together” era.”

Robert Scoble
Author of tech blog Scobleizer
Why?
Because in a web beyond the browser
**APIs** are how people get to your business.
You need to see things from the perspective of the gene.
The gene is successful if the organism that carries it is successful.
You need to see your business from the perspective of the API.
The API is successful if the application that carries it is successful.
Successful applications will use many different APIs.
and they will carry those APIs everywhere
taking your business with them.
For the successful companies, **80% of traffic** will be coming from *beyond the browser*. 
Everyone else will have to play in the world that the winners make.
One last thought on evolution
Adaptive radiation in Galapagos finches

- medium tree finch (Camarhynchus pauper)
- large tree finch (Camarhynchus psittacula)
- small tree finch (Camarhynchus pappovulus)
- vegetarian finch (Camarhynchus crassirostris)
- mangrove finch (Camarhynchus heliobates)
- woodpecker finch (Camarhynchus pallidus)
- large cactus finch (Geospiza conirostris)
- Cocos Island finch (Pinaroloxias inornata)
- cactus finch (Geospiza scandens)
- warbler finch (Certhidea olivacea)
- sharp-beaked ground finch (Geospiza difficilis)
- small ground finch (Geospiza fuliginosa)
- large ground finch (Geospiza magnirostris)
- medium ground finch (Geospiza fortis)
- mainly insects
- mainly seeds
- partly fruit and seeds

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Adaptive Radiation in Twitter Applications

Visualization by Sonoa
Classifications by Oneforty.com
CURRENT
ENVIRONMENTAL PRESSURES
They can be independent or they can support each other.

It is up to you to decide if there’s harmony.
Mobile

Social

Cloud
Your company may be very well adapted to the web, but is it adapted to mobile?

Mobile devices have limited storage and processing and need to be tied in to real-world and social dimensions.

They use APIs to get at location, maps, social graphs, and events.
Social sites are data services with a critical mass of users, where each new user makes the service better.

You can’t build a new Facebook or Twitter.

But you need to access them, so you use their APIs.
Cloud computing is not about Amazon.
Cloud computing is not about Rackspace.
Cloud computing is not about Microsoft.
Cloud computing is not about Google.
Cloud computing is about

how you reach your customers
We’ve gone from libraries to APIs.

In a cloud computing world people access library-like functionality via an API.

These services are the unit of programming.

Make your API useful and it will be carried to customers you’ve never met.
CHANGE AGENCY
I know you get all this already

But how do you get your colleagues to join you in the journey to APIs?
What’s so damn wrong with the current model?

I like it and it’s working for me.

Plus, I understand it.
Actually, it’s not working.
Populations, societies, and markets are becoming more specialized and differentiated.
Consumer interest groups are fragmented.
Consumer interest groups are increasingly fragmented.
Markets are changing so fast that you can’t spend the time to

“market size, focus group, plan, develop, launch, measure and sustain”

because the market niche may be gone or fundamentally changed
A rapidly expanding range of computing platforms are needed to reach consumers.
This is not a solvable problem nor a winnable game.
The only way to win is to change the game.
Thousands of people, who are not on your payroll, who are intimately part of each of these changing interest groups and niches, must be convinced to carry your product there for you in a way that adapts to the dynamic environment.
Thousands of people, who are *not* on your payroll, who are intimately part of each of these changing interest groups and niches, must be convinced to carry your *brand* there for you in a way that *adapts* to the *dynamic environment*.
Thousands of people, who are *not* on your payroll, who are intimately part of each of these changing interest groups and niches, must be convinced to carry your experience there for you in a way that *adapts* to the *dynamic environment*.
It’s a competition for ideas
Enable your business to adapt into niches
Adaptive radiation in Galapagos finches

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- Mangrove finch (Camarhynchus heliobates)
- Woodpecker finch (Camarhynchus pallidus)
- Warbler finch (Certhidea olivacea)
- Cocos Island finch (Pinaroloxias inornata)
- Sharp-beaked ground finch (Geospiza difficilis)
- Large ground finch (Geospiza magnirostris)
- Medium ground finch (Geospiza fortis)
- Main seeds
- Cactus seeds and nectar
- Ground finch

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Only 1 of 100 will be successful – not a failure rate that you can withstand and remain in business.

You need to encourage that to happen “out there” where the cost structures and speed of business are synchronized.

Be ready to reward or acquire the winners.
SUCCESSFUL API ADAPTATIONS
Realizing that developers are your channel

Being recombinant and easily mixed

Unlocking your legacy data into open APIs

Driving new data into your system via open APIs

Supporting your application ecosystem
Why do you need to attract developers?
Because **applications** are the fastest growing and fastest changing organisms in this environment and they’re built by **developers**
Unsuccessful adaptations to this world are based on the following conventional wisdom.
Companies providing APIs to access their business are the supply. Developers who build against those APIs are the demand.
This is exactly wrong.
developed

Companies providing APIs are the demand
Companies providing APIs are the demand.

They demand developers’ attention and adoption.
Developers building with APIs are the supply
Developers building with APIs are the **supply**

They supply innovation and **adaptation**
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- large ground finch (Geospiza magnirostris)
- medium ground finch (Geospiza fortis)
- cardinals and parts
- mainly insects
- by insect

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Developers now sit between you and your customers.

They are like the retail store in the value chain.
SUCCESSFUL

API ADAPTATIONS
Two rules for marketing your API to developers

1. Don’t assume that developers are clamoring for your API.
2. Don’t assume that developers will want to use your API alone.
Be robust so that your API is recombinant
This is all about the customers.

To the customer it shouldn’t feel like a disjointed experience. It's like a bank: ATM, teller, website, iPhone app.

This is the price of admission. this is the level of fidelity we need with the customer.

Mike Debnar
VP Retail, Blockbuster
recombinant

Rules for robustness
recombinant

REST first, everything else second
Nothing weird: straight XML, straight JSON
Keep responses small
Keep calls granular
No custom security schemes: use OAuth
Don’t make the developer deal with PCI-compliance
Sample code wins every time
You’ll get it wrong the first time – so listen well
Be remixable so that your API is **recombinant**
(a) Plasmid pUC19. The pUC19 plasmid is an E. coli plasmid of 2686 base pairs that contains a replication origin, an ampicillin resistance gene ($amp^R$), and a lacZ gene coding for β-galactosidase. Eleven restriction sites are clustered within the lacZ gene.

(b) Procedure for inserting a foreign gene into pUC19.

1. Cleave vector with restriction enzyme.
2. Cleave foreign DNA with same restriction enzyme.
3. Mix vector and DNA fragment under conditions that favor base pairing.
4. Treat with DNA ligase to join DNA pieces covalently.

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recombinant

Rules for miscibility
Observe your adjacencies
Don’t break social sign-ons
If location matters then match Google Maps
Don’t require session management
Provide sample code for expected remixes
Reward creativity through promotion
SUCCESSFUL

API ADAPTATIONS
Unlocking your legacy data into open APIs
Open APIs for your legacy data means innovation can happen **out there**
Product Catalogs that integrate with your backend
Customer Preferences based on your interactions
Historical Purchases through your existing sites
Logistics Information about your supply chain
Seasonality on purchases of goods and services
Location of historical purchases
User Recommendations of good and services
Service Providers that you have transacted with
Leveraging the API Economy is core to Sears’ strategic vision.

As the top retailer in multichannel reach, Open APIs are a critical element for expanding our brand and creating new opportunities for engaging with customers wherever they are.

Abhay Jain
Director Online Technology, Sears
SUCCESSFUL
API ADAPTATIONS
Driving new data into your system via open APIs
Data is the new business model

Each new user makes the service better

Use the tail to feed the head
new data

GameSpy Open

One **single API** for the head and the tail
Tail policy: limited access for **free**
Head policy: unlimited access for **fee**
SUCCESSFUL API ADAPTATIONS
Helping your *finches* succeed
Help your application ecosystem succeed
An app is only as strong as its weakest API call.

Your API is a product like any other product.

Design for scale of business processes.

There is a huge gap between a feature and a business.
Bake your business model into your API.

John Musser
Founder, Programmable Web
### API business models

<table>
<thead>
<tr>
<th>Who</th>
<th>What</th>
<th>How</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon eCommerce</td>
<td>Retail</td>
<td>Affiliate Model</td>
</tr>
<tr>
<td>Amazon S3</td>
<td>Infrastructure</td>
<td>Pay-as-you-go</td>
</tr>
<tr>
<td>eBay</td>
<td>Auctions</td>
<td>APIs for listings</td>
</tr>
<tr>
<td>Salesforce.com</td>
<td>SaaS CRM</td>
<td>Seat licensing</td>
</tr>
<tr>
<td>Exact Target</td>
<td>Bulk Email</td>
<td>Tiered pricing</td>
</tr>
<tr>
<td>Facebook</td>
<td>Social Network</td>
<td>Pixel sharing</td>
</tr>
<tr>
<td>Cypress Golf</td>
<td>ASP Tee Times</td>
<td>Integration</td>
</tr>
<tr>
<td>Rhapsody</td>
<td>Music</td>
<td>Strategic partnerships</td>
</tr>
</tbody>
</table>
application ecosystem

It is not just about selling in
It is about selling through.
I was reminded of that yesterday when Paul Forster, the CEO of Indeed, said this at our portfolio summit yesterday:

We tried charging for our API without much success. Then we paid developers to use it and it took off.

In the case of Indeed, they initially offered online publishers the ability to pay for a real time search API of online jobs. Not many took them up on that offer. But when they injected their sponsored jobs into the API and offered to share the revenue with publishers, the demand was huge.

Not every company that has an API can do this jujutsu move on the market, but many can and should. It makes life much easier.
In CLOSING
John Musser
Founder, Programmable Web
New Web “distribution models” driving reach and network effect

From http://blogs.zdnet.com/Hinchcliffe
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- warbler finch (Certhidea olivacea)

Mainly seeds, mostly seeds and fruits, mainly insects, and mainly fruit.
THANK YOU

Questions and ideas to:
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