Thinking about language in space

When we think of language and long-term space travel

But what will happen to the human language(s) on board? We know that language will change. Interstellar travel is a great environment for shift, no predicting how or how much language will change. Looking at Earth-bound examples, we can prepare for various outcomes. We recommend making sure the crew is prepared.
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We recommend making sure the crew is prepared
Potential problems and issues

Lower ability to communicate with home base
Changes will compound as each new vessel arrives
Space colonies will continue language development
How will multilingualism affect things?
Not assuming particular mission parameters
The nature of language change

What is language change?

How does it work?

How fast does it happen?

How predictable is it?
How languages change
The nature of language change

Languages are systems
(or groups of systems)

Dialects are varieties of a language tied to a
socially significant group

Most language change is systematic
It occurs throughout the grammar

It has numerous exceptions

<table>
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<th>sound structures</th>
<th>Indo-European</th>
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How languages change

The nature of language change

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sentence structures

Subject-Object-Verb (SOV) → Subject-Verb-Object (SVO)

þæt ic þas boc awende
that I this book translate
‘that I translate this book’

With this ring, I thee wed
One swallow does not a summer make
Specific language change cannot be predicted.

- It has no fixed rate.
- It is not teleological (and is often cyclic).
- It is not planned or designed.
Change can be pretty quick

The nature of language change

Some major changes can be relatively quick

Great Vowel Shift: 1400-1600

progressive passive: since 1800

My house is currently building → My house is currently being built

get as helping verb: since 1850

my child got promoted, She got angry

Northern Cities Vowel Shift: since 1930s

Uptalk: since 1970s

(sidenote: uptalk is not a question intonation!)

credit: http://facweb.furman.edu/~mmenzer/gvs/what.htm
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Social factors in language change
The nature of language change

The rate and extent of change often depends on social factors. Languages may diverge due to lack of contact or might converge toward other communities, especially if they’re smaller and more isolated. Change is often driven partially by language identity.
Language change in exploratory contexts

long space voyage: ideal environment for language change

relatively small group isolated from home forming a new community

but: no real-world examples to learn from

similar cases on Earth
Austronesian languages → Polynesian languages (isolated; little outside influence)
Malagasy (not isolated; major influence from Bantu)
Indies (modern Indonesian, Malay, Tagalog, et al.)
19th-century colonization
Language change in exploratory contexts

New Zealand English

Large numbers of English speakers mid 1800s

relative isolation $\rightarrow$ convergence

in 3 generations, a new dialect (koinéization)

dominant community of the area
19th-century colonization

Language change in exploratory contexts

German-speaking colonists in Texas (1840s – World War I)

Dialects merged into new variety (Texas German)

Koinéization incomplete

Perhaps due to minority status
What we can expect
Language change in exploratory contexts

Dialects on board will begin to merge
Then a new dialect will emerge
Eventually enough shift → a new language
Could take several generations or hundreds of years
Considerations for modern exploration

Culture of language use has changed since those times

How have these affected language change?

language policy
education
telecommunications
Language policy
Considerations for modern exploration

internationalization → some common language(s) of use

lingua franca
official language(s)
translations
Language policy
Considerations for modern exploration

internationalization → some common language(s) of use

lingua franca

official language(s)

translations

Without explicit policy, conventions emerge, but confusion can occur
Education

Considerations for modern exploration

children crucial for language acquisition & change

education promotes particular languages/dialects

compulsory nature strengthens this promotion
it also promotes a prestige variety 
change slows...in that variety 
often not used in spoken life 
change continues 
Earth English ≠ Vessel English 

(1) ‘When did the vessel arrive?’
   Literary French: 
   *Quand arriva-t-il le vaisseau?*
   Spoken French:
   *Il est arrivé quand, le vaisseau?*
Telecommunications
Considerations for modern exploration

TV, Radio, Internet: We’re more connected than ever

People often think dialects are levelling
Telecommunications
Considerations for modern exploration

TV, Radio, Internet: We’re more connected than ever

People often think dialects are levelling

But dialects are *diverging* more

Markers of social identity in a homogenized culture
Telecommunications
Considerations for modern exploration

ship-bound dialects will emerge
distance → less communication with Earth
Earth languages could be limited to ritual
Multilingualism on board

So far we’ve assumed one language on board

But modern crews are multilingual

How does that work long-term?
Ensuring crew communication

Multilingualism on board

Automatic translators = pipe dream

Policy will be required

Multilingualism is a virtue now

Translate everything (EU)? Working languages (UN)?
Congenital hearing loss: >2/1,000 births
Sign language will be required
Full languages distinct from spoken (American SL ≠ British SL)
Can be acquired, if people are using them
These change too!
Conclusion
Recaps and recommendations

Long-term voyage or colonization
Crisp predictions impossible
But change is inevitable
Language will diverge from Earth
Each crew/colony will diverge in its own way
Conclusion
Recaps and recommendations

Will friction be linked to language differences?
An informed policy is crucial
Crew requires metalinguistic training
Natural experiment for linguistic science
This is the end of the talk

Thank you!

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