

Appendix II

Positional Phonesthemes /r/ in Second Position

Below are the results for this test as performed for English monosyllables in initial position. The classes which /r/ in second position was found to occur in frequently were:

- Rupture and Fractioning
- Garbage
- Brats and Grumps
- Iteration
- Deception
- Containers
- Verge, Brim
- Directed Movement Verbs
- Pressure
- Receiving
- Support
- Future
- Groups
- Grab/Crave
- Three

Some additional classes were considered which are not any more typical of /r/ than of other phonemes:

- Heat
- Water
- Sound
- Emotion
- The Mind
- Materials
- Pretty

I observe that often the classes that match up most closely differ by semantic characteristics which are even narrower than the two defining phonemes would suggest. For example, in the rupture class for voiced stops in initial position. /r/ tends to rip, break, part and tear no matter where it's positioned in the word, and /d/ is downward and linear throughout the English lexicon (as well as frequently wet), but /dr/ in this rupture class is not just an vertical line that is fractioned into several pieces; the words specifically concern dripping water. This is the phenomenon I refer to as 'clustering': phonesthemes are even more narrowly defined than they need to be given the characteristics of the phonemes involved. Reference seems to be applicable to whole classes of words, as in /dr/[V] -> downward flowing water usually repetitively broken.

/r/ in Second Position

Rupture and Fractioning

/r/ initiates many words of 'ruin' and 'ripping'. This phonestheme is active when /r/ is in second position as well. The ruptures that are non-iterative show up when a stop consonant is in initial position. If the stop is voiced, we have an additional and related class of words which are fractioned into many pieces. And if a fricative is in initial position, the result is broken into uncountably many fine particles. Feature may be informally characterized as follows:

- [+stop, +voiced] - many distinct but countable parts
- [+stop, -voiced] - snip off an end or pierce at a point
- [+fricative] - mashed into single consistency, pieces are uncountably many
- [+labial] - ends, points, tips
- [+dental] - lines
- [+velar] - rupture in a surface

The verbs are listed first and the related words which are the results of the actions of these verbs appear immediately behind them.

a. Rupture

[+stop]

/b/

- Break - something hard broken off or severed into two or more pieces
bran, branch, breach, break, brief, brittle, brook, browse, bruise

/d/

- Dig - regular breaking downward through dirt
dredge, drill
- Dirt - that which remains from digging
dreck, dredge, dregs

/g/

- No verb exists
- Groove - an open indentation, the deepest point is typically not visible
grave, groin, groove, grotto

/p/

- Prick - a long hard object with a point which pierces a surface at one point
prick, prickle, probe, prod, prong

/t/

- Trim - something linear and often growing the tips of which are cut back just slightly
trim
- Trifle - a small thing which has been made out to be bigger than it is
trifle, trinket, trite

/k/

- Cut - to cut a surface
crack, crop
- Crack - deformities in a surface
crack, cranny, crater, crease, crevasse
- Crunch (Crinkling sounds) - the sound of deforming a surface
crack, crackle, crash, crinkle, crunch

b. Fractioned/Many Pieces

[+stop, +voiced]

/b/

- Branchy - radiating lines from a base
bracken, braid, brake, bramble, branch, briar, bristle, broom, brow, brush
- Breed - offspring of a single source
brace, breed, brood, brother
- Type - a group which all fit a specific characterization and have a common source
brace, bracket, branch, brand

/d/

- Drip - liquid flowing linearly cut into drops
dribble, drip, drizzle, drop
- Drop - particles of liquid resulting from dripping
dribble, drip, drivel, drizzle, drop

/g/

- Grind - to push through a grid
grind, grate
- Grid - a network of lines crossing at 90 degrees to form squares
grate, grid, grill, grille, graph
- Grainy - small bits resulting from grinding
grain, gravel, grit

c. Broken into a Mass of Uncountably Many Tiny Particles

[+fricative]

/f/

- Fray - to split the tips of something soft into a mass of fuzz or foam
frizz, frizzle, fray, froth, fry
- Frill - intricate decorations at the edge
frill, frieze, fringe, frock
- Froth - foam, uncountable, small bubbles or bits, usually in liquid
(freckle), frost, froth

/T/

- Thresh - to flail something flexible and linear fairly violently
thrash, thresh
- Thread - a long piece of materials thinner than a string
thread

/S/

- Shred - to cut something solid into many small strips or particles
shred

Iterative/Non-breaking

/r/ initiates many words of rippling, rolling and other repetitive undulating motion. As we have seen, when /r/ is preceded by a voiced stop or a fricative, this undulation succeeds in causing a multiple fracture. But when an unvoiced stop precedes /r/, it cannot cause a multiple rupture. In terms of 'phoneme physics' this suggests that perhaps unvoiced stops are somehow more impervious to /r/ than their voiced counterparts. Again, we find labials clustering around points, dentals around lines, and velars around surfaces:

[+stop, -voiced]

/p/

- Prickle - a sensation of being pricked at a multitude of tiny points
prickle

/t/

- Tremble - waver back and forth along a line between two positions
trickle, trill, tremble, tremor

/k/

- Crinkle - combines the rippling of /r/ with the corners of /k/to produce multiple corners and creases in a surface
crackle, crag, cram, cramp, crash, crest, crewel, crick, crimp, crinkle,crisp, cream, crochet, crumb, crumble, crump, crumple, crunch, crush, crust, crystal

Garbage

The rupture in /r/ gives rise also to words for waste. Feature may be informally characterized as follows:

[+labial] - senseless, empty waste of time or energy

[+dental] - that which is thrown or drained away

[+velar] - greasy or crumbly texture, excess from something eaten or used

[+stop] - emphasis on the waste itself

[+fricative] - emphasis on the activity of discharging and its subsequent release

[+voiced] - dirtier, more heavy duty garbage

/b/

- Brabble - empty, boastful talk
brabble, brag, brattle, bray

/d/

- Drain - waste liquid drained, or the remains after liquid is drained
drain, dreck, dregs, drivel, drool

/g/

- Grease - greasy excess
grease, grime, grisly, gristle, gross

/p/

- Prattle - empty chatter
prate, prattle

/t/

- Trash - that which is thrown out
trash

/k/

- Crap - excess
crap, crud, crumb

/f/

- Frivol - senseless, empty activity, waste of time

fribble, frill, fritter, frivol

/T/

• Throw - to eject, in this context to subsequently ignore
throw

/S/

• Shrug - to ignore. The difference between throwing and shrugging is that throwing involves picking it up and ejecting it forcibly away. With a shrug, it just rolls off by itself
shrug

Derogative Terms for People

/r/ has a lot of human trash as well, along with adjectives to describe them and other words outlining their activities. 'People' is a concrete noun class. A characterization for the features is therefore harder to pin down. Each of the initial phonemes with the exception of /d/ also occurs in a few terms for people which are not derogatory: brother, groom, prince, trust, Christ, friend, throne, shrine

/b/

Brat - brat, brute
Brazen(adj) - brash, brazen, brusque
Bridle - brawl, bridle, bruise

/d/

Drag - drag, drip, drone, drunk
Dreary - drab, drawn, dreary, drunk, dry
Drug - drink, drop, drowse

/g/

Grouch - grouch, grump
Grumpy - grim, gruff
Growl - grimace, gripe, groan, grumble, grunt, growl

/p/

Prude - prig, prissy, prude, prune
Prim - pretty, prim, prissy, proper
Pimp - preen, pimp

/t/

Troll - troll (tyrant)
Trample - trammel, tramp, trample, tromp, trounce

/k/

Crook - creep, crook
Cruel - craft/y, craven, cruel
Crunch - crime, crumple, crunch, crush
Cretin - crank, cretin, crony, crumb
Crude - crass, crude
Cry - crave, croon, cry

/f/

Freak - freak, frump
Fret - frenzy, fret, frown
Fribble - fribble, fritter, frivol

/T/
Threat - threat
Thrill - throb, throe, thrill
Thresh - thrash, thresh

/S/
Shrew - shrew
Shrewd - shrewd, shrill
Shriek - shriek

Deception

The words of deception in this class begin with an unvoiced consonant. Two other words related to this class but beginning with a voiced sound are 'graft' and 'grift'. There are plenty of words of deception beginning with other consonants, but they do not contain an /r/ in second position. This is a very common phenomenon. Almost all phonemes can appear in words of deception, but the [-voiced]/r/ combination seems to allow for deception more readily than the [+voiced]/r/ combination.

[-voiced]

/p/
Prank - prank, prop

/t/
Trick - trap, treason, trick, trip

/k/
Crafty - craft/y, crime, crook

/f/
Fraud - frame, fraud

/T/
Throw - throw

/S/
Shrewd - shrewd, shroud

Containers

Another piece of evidence that suggest that unvoiced stops are more impervious to rupture by /r/ than voiced stops is the fact that closed containers which have /r/ in second position begin with unvoiced stops. The closest /b/ comes are 'braces' and 'brackets'. The closest /g/ comes are 'grooves' and 'grottoes'. /f/ has 'fridge' and /S/ has 'shrine':

[+stop, -voiced]

/p/
Prison - prison

/t/

Vehicle - tractor, trailer, train, tram, troika, trolley, truck
Trap - trap

/k/

Crate - cradle, craft, crate, crater, crèche, creel, crib, crock, crypt

Edge of Something

There is a class in /f/ and in /b/ which relates to the edge of something. In /p/, we find tips and points, as well as 'prime' examples, but not edges, and in the other phonemes, we find neither.

[+labial]

/b/

• Brim - a liquid or other substance on the verge of spilling over
brim, brink

/f/

• Fringe - a fuzzy or fine border, tip or surface, often perceived as superfluous
fray, frieze, frill, fringe, frizz, frizzle, froth

Directed Movement Verbs

/r/ begins a large class of words concerning running, riding and roads. This phonestheme also occurs when /r/ is in second position after a stopped consonant. In this case, the effect of the phonological features might be characterized as:

[+voiced] - no concern for the result

[-voiced] - specific intention or result

[+labial, +stop] - pressure onto something, often from within a container with a narrow opening like a well or the lungs

[+dental] - natural linear motion, against resistance in /d/ and generally with little resistance in /t/ and /T/

[+velar] - motion over (/k/) or rooted in (/g/) a surface or terrain

[+stop] - specific path

[+fricative] - no concern for the path

/b/

• Blow - flow of air
bray, breath, breathe, breeze

/d/

Down - we find several classes of flowing. With the exception of a 'draft' of air, all of them are natural, downward and heavy or slow

• Drip - liquid

drain, dram, drench, dribble, drift, drink, drip, drivel, drizzle, drool, drop, drown

• Drag - friction against the ground

draft, drag, draggle, draw, dredge, drive, drove, drudge

• Drape - concerning cloth

drape, dress, droop, drop

• Draft - air

draft

/g/

- Grow - plants rooted in the ground
graft, green, grow
- Grains - grass, grist, grits, gruel, groat, grout
- Garden - grange, grant, green, grove

/p/

- Press - pressure against a single point in order to initiate a process
press, prime (pump)

/t/

Travel - motion by people along a specified course without resistance and with an intended goal

- Travel - motion of people by vehicle
travel, trawl, trek, trip
- Track - a course along which one travels
track, tract, trail, trellis, trestle
- Tread - by foot
trammel, tramp, trample, tread, treadle, tromp, trot, trounce, trudge
- Vehicle - a vehicle in which one travels
tractor, traffic, trailer, train, tram, troika, trolley, truck
- Tray - a container or plate one uses to assist in carrying things while traveling
tray, truckle, trundle, trunk
- Traveller - a person who travels
tramp, tribe, troop, troubadour, troupe
- Trail - travel while dragging something behind
trail, trawl

/k/

- Cross - motion over something with clear boundaries
cross
- Crawl - motion by a person or animal while crouched over and against resistance
crawl, creep
- Cruise - travel on the ocean with no particular goal for leisure, typically by the upper class
cruise

/f/

- Free - unlimited by any outside force
frank, free, frolick

/T/

- Throw - project into flight by an initial force
throw, thrust

Pressure

Words beginning in /r/ which involve pressure are implicit in many classes such as those of support, raising and rubbing. All the relevant phonemes can occur in classes in which the force of /r/ is pushed up against something. The features can be characterized something like:

- [+voiced]** - focus on the process, heavy
- [-voiced]** - focus on the point of contact
- [+labial, +stop]** - support or preparation from behind
- [+dental, +stop]** - natural linear motion
- [+velar]** - pressure against a surface out in front
- [+stop]** - pressure causes a permanent effect
- [+fricative]** - solidify into a mass, effect in place only as long as the conditions maintain

/b/

• Brunt - a base which forms a foundation for something heavy which must not collapse
brace, brake, break, breech, bridge, brook, brunt

/d/

• Drag - pulling something heavy along the ground against friction along a path
drag, draggle, draw, dredge, drudge
• Drive - pushing something forward forcefully along a path
draft, drive, drove

/g/

• Grind - passing something through a sharp planar net
grate, grill, grind

/p/

• Press - pushing with a pointed object on a specific point
prance, press, prick, print, prod, prong
• Prop - leaning against something which it touches at a point
prone, prop

/t/

• Tread - stepping down heavily with the feet
tread, treadle, trammel, tramp, trample, tromp, trounce

/k/

• Crush - to break something solid between two surfaces by means of pressure
crack, crash, cream, crumb, crumble, crunch, crush
• Crinkle - something which is made to have creases or corners by applying pressure
cram, cramp, cranny, cramp, crease, crick, crimp, cringe, crinkle, cripple, crouch, crump, crumple, crystal

/f/

• Freeze - solidification by cold
freeze, frost

/T/

• Throng - a group of living beings pressed into a dense mass seeking some object of interest
throng

Receiving

Some of the stops have classes of words for receiving which does not happen by force:

[+stop]

/b/

• Bridge - connection between two points
bridge, bring

/g/

• Give - receipt from a large, magnanimous and often unforeseen source
grace, grail, grant

/p/

• Proffer -

prize, proffer

/t/

- Trove - receipt by chance
- treat, trophy, trove, trump

Support

In initial position, /r/ can 'rally' to support. This is similar to its tendency to 'raise' or work against the force of gravity. Most of the 'raising' in second position falls together with words of pressure. The fricatives of course do not offer any support.

[+stop]

/b/

- Base - foundation on which something rests
- breech, brunt

/d/

- Drive - to push forward along a path
- draft, drift, drive, drove

/g/

- Ground - the ground! from which things grow
- ground

/p/

- Prepare - get something ready for a future event
- prep, prime, prior, primp, pro, probe, prone, prompt, prop

/t/

- Truss - trapeze, truss

/k/

- Crutch - a fastener which one leans on in walking
- crampon, crutch

Future

We outlined a class beginning with /r/ of words of preparation. Here we consider more generally words which propel into the future. The features might be characterized as:

[+labial] - initiation

[+dental] - propelling a process in mid-stream

[+velar] - a mature process

[+stop] - emphasizes a starting point, boundaries

[+fricative] - emphasizes the process itself

[+voiced] - creation of something new

[-voiced] - implies an ongoing, preexisting or pending process

/b/

- Begin - initiate a new process
- branch, break, breed, brew, bring, broach

/d/

- Drive - propel a process in midstream so that it comes into being
draft, drive

/g/

- Grow - development of something into something bigger
green, grow

/p/

- Prepare - make ready for an upcoming event
prep, prime, primp, probe, prompt, prone, prop

/t/

- Trigger - flip a switch to set a pending event going
trigger, trip
- Train - the process of learning to perform a task
train, try

/k/

- Cross - after having come some way in a process, moving over a boundary into a new dimension
cross

/f/

- Forward - motion outward at the anterior end of a process
fro, front, frontier

/T/

- Through - motion en route surrounded by something along a linear path
thread, through

Groups

We found a phonestheme in /r/ centered around large quantities. The features for groups can be characterized as follows:

[+labial, +stop] - group selected for a purpose

[+dental] - gathered by following a common goal

[+velar] - general gathering

/b/

- Branch - a subdivision broken off from a source
bracket, branch, brand, breed, brood

/d/

- Drove - people or animals driven from behind toward some goal
drove

/g/

- Group -
grade, gross, group

/p/

- Prime - the best candidates from a larger class
prime, prize

/t/

- Troupe - traveling groups
- tribe, troop, troubadour, troupe

/k/

- Crowd -
- crew, crowd

/f/

- Phrase -
- frame, phrase

/T/

- Throng - people or animals drawn toward some goal
- throng

Size

Related to groups are words for large size. These occur in those stops which form a container of the mouth.

[+stop, -dental]

/b/

- Broad - wide, expansive
- broad

/g/

- Grand - large, magnificent
- grand, great

/p/

- Prime - The best from a group
- prime, prize

/k/

- Crest - The top part
- crest, crown

Grab/Crave

These words involve forcefulness and desire. Those in /g/ actually have a hold on the desired, whereas those in /k/ only suffer, but can't touch what they want. There is also the verb 'bring' which is similar in some ways, but doesn't have this element of desire. It also ends in a velar.

[+velar]

/g/

- Grab - to hold forcefully to something
- grab, grabble, grapple, grasp, greed, grift, grip, grope, grub

/k/

- Crave - to desire greatly

crave, croon, cry

Three

[+dental, -voiced]

Trio - treble, trio, triple, trivet

Three - three, thrice

Other Semantic Domains

Heat/Fire

Broil - braise, braze, brew, bright, broil, broth

Dry - dry, drought

Grill - griddle, grill

Fry - fry

Shrivel - shrivel

Water

Unsettled - breaker, brine, brook

Drip - drain, dram, drench, dribble, drink, drip, drivel, drizzle, drool, drop, drown

Greasy - grease, grime, grisly, gristle, gross

Trickle - trickle

Creek - creek

Froth - froth

Freeze - freeze, frost

Sound

Bray - brabble, brag, brattle, bray

Drawl - drawl, drone, drum

Grumble - gripe, groan, grumble, grump, grunt, growl

Prattle - praise, prate, prattle, pray, prayer, preach, proof/prove, proffer

Trumpet - trombone, trumpet

Cry - croak, croon, cry

Crinkle - crackle, crash, creak, crinkle, crumple, crunch

Phrase - frame, phrase

Thrum - throb, thrum

Shriek - shriek, shrill

Emotion

Anger

[+voiced]

Bridle - bridle, brood, brusque

Drat - drat

Grumble - grim, grimace, gripe, grit, grind, grudge, gruff, grumble, grump, grunt, grouch, growl

Sadness

[+stop, -labial]

Dreary - drab, drawn, dreary, dry

Grieving - grave, grief, grieve

Trouble - trauma, travail, trouble, trudge

Crushed - crack, crumble, crush

Hysteria

[+fricative]

The closest word in the stops is 'craze' which seems to differ from hysteria in that it is authentic

Frenzy - frenzy, fret

Throe - throe

Shriek - shrew, shriek, shrill

Happiness

Brave - brave, bravo, brazen, bright, brisk

Droll - droll

Great - grand, great, grin, grit

Proud - praise, prance, pride, proud

Triumph - treat, triumph, trophy

Frisky - frank, free, frisk/y, frolick

Thrill - thrill, thrive, throb

Fear

[-labial, -stop]

Dread - dread

Grovel - grovel

Tremble - tremble, tremor

Crouch - crawl, creep, cringe, crouch

Fear - freeze, frenzy, fright

Threat - threat, throb

Shrink - shrink, shrivel

Sleep/Trance

[+dental]

Drowse - dream, drop, drowse, drug, drunk

Trance - trance, tranquil

The Mind

[+labial] - completed, clear

[+dental] - process, implicit goal or direction

[+velar] - unclear, unexamined

Bright - brain, bright

Drill - drill, drive

Understanding - grapple, grasp, grip, grog, grope, ground

Prove - proof, prove

Trust - trade, treaty, troth, truce, true, trust, tryst

Credo - creed, credo

Frame - frame, phrase

Shrewd - shrewd

Material

[+fricative]

Drape - drape, dress

Crochet - crewel, crochet

Frock - fray, frill, fringe, frock
Thread - thread
Shroud - shroud

Pretty

The words 'bright', 'groom', 'trim' and 'fresh' are similar, but most of the priming is in /p/

/p/
Pretty - preen, pretty, prim, primp, prissy, proper, prune

Comments

The non-concrete monomorphemic words which have an /r/ in second position and which have not been mentioned in the foregoing discussion are:

- **brawn, bribe**
- **graze, greet**
- **prey, prowl, price, prairie**
- **trace, trait, trend**
- **crux**
- **frail, fraught, frisk**

Summary

Let us form a tentative and informal semantic characterization of the phonetic features based on the data given above for /r/ in second position:

[+voiced]

- many distinct but countable parts
- dirty, angry
- heavy duty
- little concern for results
- creation of something new

[-voiced]

- an end or point
- iterative but non-breaking
- specific intention or result
- an ongoing, preexisting or pending process

[+stop]

- emphasis on a thing or product as opposed to a process
- specific path, starting point, boundaries
- receiving, support
- end, point, boundary, container, marginally breakable

[+fricative]

- mashed into single consistency
- soft
- uncountably many
- emphasis on the activity or process itself
- release, no concern for the path, hysteria

[+labial]

- a narrow opening
- selected for a purpose
- ends, points, tips, edges, initiation
- senseless, empty waste of time or energy
- completed, clear

[-labial]

- sadness
- fear
- narrow opening
- group selected for a purpose

[+dental]

- linearity
- natural motion, sleep/trance
- implicit goal or direction
- mid-stream, process

[-dental]

- large size

[+velar]

- surface
- a mature process
- gathering, grabbing, craving, excess
- something hidden, unclear, unexamined

[+dental, -voiced]

- three

Appendix III

Phonosemantic Classifications /b/ vs. an Arbitrary Sets of Words

Non-Concrete Classes

Water

Random: - [+liquid], /s/: drip, drown, floe, froth, hoar, ice, moor, plunge, rinse, souse, sprite, sump

B-Words: bail, bath, bathe, bay, beck, bed, bleed, bloat, blood, blot, blotch, blue, bob, bog, boil, branch, breach, break, brew, brine, brook, broth

Light

Random: - /l/: clear, glow, light, pale, spark

B-Words - /l/, /r/ (Bright): bask, beam, blanch, blank, blaze, bleach, blink, blip, blitz, blond, blush, bold, bolt, brand, braze, bright, bulb, burn

Fire

Random: - /k/: bake, spark

B-Words - /r/ (Hot): bake, blaze, boil, bolt, braise, brand, brew, broil, broth, burn

Money

Random: - /b/, /g/, V/t/: bank, bill, bit, bourse, dime, gelt, gift, thrift

B-Words: bail, bank, bar, bear, bet, bill, bit, bleed, blow, bob, bond, bourse, brass, bread, bribe, buck, bull, bunch, buy

Group

Random: bloc, brood, caste, copse, group, list, race, squad, tribe, zoo

B-Words: bale, band, bank, bar, batch, bed, bench, bloc, block, blood, board, bond, book, brace, branch, brand, breed, brood, bunch, bund

Amounts

Random - /t/: bit, dot, much, thick, ton

B-Words (Large): bank, beaut, best, big, bis, blow, boon, boot, both, brisk, broad, bulk

Area

Random - V/l/: realm, weal

Boundary

B-Words: bank, bar, beach, belt, blank, bluff, bound, break, breath, brim, brink, brow, brunt

Constrained

Random - /t/: girt, lest, neat, terse, vise

Impediments

B-Words: balk, ban, band, bank, bar, barb, bate, bay, bib, bit, bitch, blind, block, bluff, bog, boom, boot, brake, brig, bund, bung

Interfere

B-Words: bag, ban, bar, bate, bench, bend, bilk, bind, blank, blind, block, blot, bluff, blunt, blur, bog, bolt, boss, bounce, bout, brake, breach, break, brook, brush, buck, buff, bug, bump, butt

Stop/Wait

B-Words: bait, balk, bate, bear, bend, bide, bilk, brace, brake, break, brew, brook, buck

Ask

Random: ask, beg, pry, pump

B-Words: beck, beg, bend, bid, bill, boon, boss, bribe, bum

Eat

Random: chow, snack

Take/Receive

Random - [+labial]: bet, bill, nab, pinch, rake, tax, theft, thrift, trap

Bind/Fasten

B-Words: band, bar, baste, belt, bind, blend, bolt, bond, bound, bow, brace, braid, braze, bridge, bunch, bund

Bump

Random - [+labial]: bulge, dune, heap, lobe, nub, paunch, rough

B-Words: bag, bale, ball, bay, bead, belch, bell, bilge, blimp, blip, bloat, blob, blouse, blow, boil, boll, boob, breast, bud, bug(eye), bulb, bulge, bum, bump, bunch, bun/s, burl, burst, bust, butt, butte

Incline/Fall

Random: cline, cock, prone, sheer, step, stoop, swoon

Float/Bounce

B-Words: ball, bank, bath, bathe, beach, bilge, birl, blimp, bloat, boat, bob, boil, bounce, bound, breach, breeze, buck, bulge, bump

Long/Thin

Random: flue, knife, oar, peg, pole, rake, saw, screw, shot, strand, thorn, trunk

B-Words (Sticks, Building Materials): balk, bar, bat, bead, beam, birch, birl, blade, bloom, board, bone, boom, bough, brace, branch

Foamy, Frilly

Random - [+fricative]: frill, froth, shag

B-Words (Brushy): bang, barb, beard, bosk, braid, brake, branch, broom, brow, browse, brush, bur, burr, bush

Strike/Touch

Random - /b/, /p/, /k/: bash, beat, bonk, bop, dab, kiss, pinch, pry, pump, screw, shot, smite, sock, zonk

B-Words (Violent): barge, bash, baste, bat, bate, bean, beat, belt, biff, bite, blitz, blow, bob, bolt, bomb, bonk, boot, bop, bounce, bout, box, brain, brawl, broil, bruise, brush, buck, budge, buff, bump, bung, bunt, bust, butt

Cut

Random - V/r/: char, knife, lathe, pare, saw, scar

Break

B-Words: barge, bark, bite, blot, blow, bob, bore, brain, brake, branch, breach, break, bruise, bum, burn, bust

Throw/Send/Give

Random - /p/: file, pitch, pour, send, shot, slough, spit, spout

Explode

B-Words: barf, bam, bang, bash, belch, blast, blow, blurt, boil, bolt, bomb, boom, burp, burst, bust

Blow

B-Words: belch, blast, bloat, blow, breath, breathe, breeze, burp, burst, bust

Spend

Random - /s/, /t/: bet, rent, spend, splurge, swap, tithe

Shake/Bend/Turn

Random - /t/, /r/, /w/: braid, fan, flail, flex, stoop, swerve, swoon, torque, twirl, wag, wrench

B-Words (Bend): bend, bight, bow

Move

Random [+liquid]: go, haul, plod, plunge, race, romp, schlep, scull, slip, step

Depart

B-Words: back(off), bail(out), beat(it), blast(off), blow, board, bolt, book, boot, bounce, bow(out), break, brief, brush(off), buck, bus, butt(out), bye

Dirt/Grime

Random - [+sonorant]: crud, gaum, murk, scrag, slough, snot, soot, sump

B-Words: blot, blotch

Error

Random: glitch, goof, jam, slip

B-Words: balk, bilge, blot, blotch, blow, botch, bounce, bug, bull, bum, bunk, burn

Badness

B-Words: bad, bale, bane, base, black, bode

Weak/Sad

Random - /w/: bawl, drawn, fray, lorn, wan, weep

B-Words (Sad): bawl, bear, blah, bleak, blear, blue, bum, bust

Irritation

Random - /r/: irk, rough

B-Words: ban, barb, barge, bile, bitch, bite, black, blame, blast, blaze, blight, blitz, blot, blow, boil, bore, brand, brew, broil, bug, burn, bust, butt

Deception

Random: ape, bluff, con, feint, hex, screw, shark, sleight, sly

Crime

B-Words: bait, bilk, bluff, breach, bribe

Question

Random - /w/: who, why

Slow

Random - /l/: glitch, haul, lag, lapse, list, long, plod, schlep

Withdrawal

Random: shirk, shy, strand

No

Random - /n/: nix, nope

Emptiness/Blindness

B-Words: back, bail, bald, bare, bilge, blab, black, blah, blanch, bland, blank, bleach, bleak, blear, blind, blink, blip, blob, block, blot, bluff, blur, bore, bosh, bounce, break, broke, bull, bum, bunk, bush, bust, bye

Cry/Talk

Random - /b/, /p/: bawl, beg, bill, bode, mot, pitch, preach, squib, weep, yawp

B-Words (Loud, Effusive): bah, barb, bark, bash, baste, bat, beard, beck, beef, beg, bend, bet, bid, bilge, bill, bis, bitch, blab, blame, bless, blot, blow, bluff, blunt, blurb, blurt, boast, bode, bolt, book, bore, bosh, boost, boss, bounce, bout, brag, brand, bull, bunk, butt, buzz

Exclamations

B-Words: bad, bah, bam, bang, bash, blah, blast, blaze/s, boo, boom, bosh, boy, bud, bull, bye

Noise

Random - [+liquid]: bawl, blare, clang, cluck, grunt, hark, horn, peal, roar, taps, ti, tune, tweet

B-Words (Loud, Sudden): baa, bam, bang, bark, bawl, bay, beep, belch, bell, birr, blare, blast, bleat, bleep, blow, bomb, bong, boo, boom, brawl, Bray, burp, burr, buzz

Beginning, Preparation

Random - [+labial], /r/: babe, brim, dawn, draft, prime, prone, spark, verge

B-Words (Beginning): babe, bairn, bang, base, bear, birth, bloom, blow(peach), board, boost, boot, boy, break, breed, bride, bring, brink, broach, brood, bud, bulb, bur, burst

Foundation

Random - V/nd/: breech, found, fund, hind

B-Words (Base, Carries Weight): back, bank, base, bed, bench, block, boost, brunt, bulk

Carry

B-Words: back, bag, barge, bear, bike, boost, box, bra, brace, bridge, bring, brook, brunt, bulk, bus

Surface

Random - /p/, /l/: ledge, plaque, porch, slate, step

Middle

Random: gap, half, midst

End

Random: close, old, taps

Future (see Departure above)

B-Words: bait, bank, bate, beck, bent, bet, bid, bide, bill, bode, bond, bound, brace, brew, bribe, bring, brink, brood

Ability

Random V[d,t]: could, craft, sleight, would

Possibility

Random: luck, may, ought

Strong, Courageous

Random - /r/: brave, brusque, cheek, deed, firm, flex, lead, prime, race, screw, shot, staid, starch, strict, strong, torque, vise, win, wrench

B-Words (Outgoing): bad, ball/s, bawd, beef, bold, brash, brass, brave, brawn, breast, brute

Intense

Random - [+fricative]: lush, rife, sheer, teem, thick

Immersion

B-Words: bake, bask, baste, bathe, beam, binge, bliss, brew, brim, buff

Grow

B-Words: beef, best, blast, bloat, bloom, blow, boom, boost, breed, bud, build, bulge, bulk, bull, bush

Enthusiasm

Random - [+labial]: crave, fad, flaunt, rash, suave, urge, whim, wish, woo

Exceptions

Random: air, mend, quark, sky, snide, stint, toy, troth, west, yep, yon, yum

Concrete Nouns

People/Beings

Random: babe, bloc, brave, brood, butch, chief, dude, fan, faun, foe, fop, hunk, jerk, jock, Jove, kid, kook, mime, pet, shark, sire, snot, sprite, squad, tribe

B-Words (Big, Loud, Beautiful, Sexy): babe, bach, back, bag, bail, bairn, band, bar, bard, bass, bat, batch, bawd, bean, bear, beast, beau, belle, bench, bird, bitch, blab, black, blade, blight, blimp, bloc, block, bloke, blonde, blood, blue, bluff, bond, bone/s, boob, boor, bore, boss, both, boy, brag, brain, brat, brave, brick, bride, broad, brood, bruise/r, brute, bub, buck, bud, bug, bull, bum, bunch, bund, butch, butt

Body Parts

Random: cheek, heel, heme, hind, horn, paunch, pus, sac, snot, trunk

B-Words (Bulging, Supportive): ball/s, back, bang, beak, bean, beard, bill, blood, boob, bone, braid, brain, breast, breech, brow, bum, bun, bust, butt

Clothing

Random: breech/es, cape, fez, sock

B-Words (Baggy, Underwear): blouse, breech/es, bib, boot, bra, brief

Ornaments: badge, bag, bead, bell, belt, boa, bob, boss, bow, braid, branch, brass, bronze, brooch, burl

Animals

Random: ape, cock, dog, eel, kid, mite, pet, shark, thrush, whelp

B-Words (Large): barb, bass, bat, beast, bear, bee, beef, bird, bitch, boa, boar, boss, bruin, brute, buck, bug, bull

Plants

Random: kale, sedge

B-Words (Brushy): balm, bay, bean, beet, bosk, brake, briar, brush, bush

Plant Parts

Random: bur, thorn, trunk

B-Words (Bulbs, Protective): barb, bark, boll, bough, branch, bud, bulb, bur, burl, burr

Food

Random: crepe, curd, dish, grits, jam, kale, malt, pie, quiche, rum, scone, snack, starch, steak, wurst

B-Words (Grain, Liquid): bass, bay, bean, beef, beer, blintz, booze, borscht, bran, bread, broth, brut, bun

Container

Random: cage, crock, crypt, desk, dish, glass, gulch, sac, sock, trap, trunk, vase

B-Words: bag, bilge, bin, boot, bowl, box

Building

Random: gym, home, mart, shrine

B-Words (Protection, Storage): bank, bar, barn, bin, bode, booth, burg

Vehicle

Random: skiff

B-Words (Large): barge, bike, blimp, boat, brig, bus

Furniture

Random: desk

B-Words (Crude): bank, bar, bed, bench, berth, bier, board, bunk, bus

Materials

Random: mace, salve, silk, starch, talc

B-Words (Hard): bead, bone, brass, bronze

Color

Random: gray, hue, pale

B-Words (Dark or White (/l/)): bark, bay, beech, beige, black, blanch, blank, blaze, bleach, blond, blue, bole, bronze, brown, bruise, buff

Time

Random: eon, next, pace, step, time, was

Illness

Random: blight, chafe, gag, mold, rash, scar

B-Words (Abrasion, Stomach): barf, bend/s, bleed, blight, boil, bruise, burn

Units

Random: dyne, gram, ton

B-Words (Computer): baud, bit, byte

Appendix IV

Classifying Words Beginning with /l/ According to a Phonosemantic Classification Devised for Words Containing /b/

A1 **Bulging, Brushy**

1 **Bulging**

/b/ Words - bag, bale, ball, belch, bell, bilge, blimp, bloat, blob, blouse, blow, boil, boob, bulge, bum, bun/s, burl, burst, bust

/l/ Words - lung

2 **Bump**

/b/ Words - ball/s, bay, bead, blip, bloat, blob, boil, boll, boob, breast, bud, bug(eye), bulb, bulge, bum, bump, bun, bunch, bun/s, burl, bust, butt, butte

/l/ Words - lobe, lump

3 **Round**

/b/ Words - bale, ball, bead, bell, blimp, blip, bloat, blob, blotch, bowl, bulb, bulge

/l/ Words - loop

4 **Bend**

/b/ Words - bay, belt, bend, bight, bow

/l/ Words - lens

5 **Brushy**

/b/ Words - bang, barb, beard, bosk, braid, brake, branch, broom, brow, browse, brush, bur, burr, bush

/l/ Words - lace, lash

A2 **Big, Much, Many**

1 **General Bigness**

/b/ Words - bank, beaut, best, big, bis, blow, boon, boot, both, brisk, broad, bulk

/l/ Words - lade, lard, large, last, load, long, loot, lord, lot, loud

2 **Groups**

/b/ Words - band, bar, batch, bench, bloc, block, blood, board, bond, brace, branch, brand, brood, bunch, bund

/l/ Words - league, list, lodge

3 **Classifiers**

/b/ Words - bale, bank, bar, batch, bed, bolt, book, bout, brood

/l/ Words - lap, leg, loaf

4 **Units**

/b/ Words - bar, baud, bit, byte

/l/ Words - league

5 **Types**

/b/ Words - brace, branch, brand, breed

/l/ Words -

6 **Money**

/b/ Words - bail, bank, bar, bear, bet, bill, bit, bleed, blow, bob, bond, bourse, brass, bread, bribe, buck, bull, bunch, buy

/l/ Words - lease, lend, lien, loan, lode, luxe

7 **Growth**

/b/ Words - beef, best, blast, bloat, bloom, blow, boom, boost, breed, bud, build, bulge, bulk, bull, bush

/l/ Words - leap

8 **Bright**

/b/ Words - bask, beam, blanch, blank, blaze, bleach, blink, blip, blitz, blond, blush, bold, bolt, brand, braze, bright, bulb, burn

/l/ Words - lamp, lase, light

9 **Immersion**

/b/ Words - bake, bask, baste, bathe, beam, binge, bliss, brew, brim, buff

/l/ Words - lush

10 Brazen, Bold

/b/ Words - bad, ball/s, bawd, bold, brash, brass, brave, brawn, breast, brute

/l/ Words -

11 Strong

/b/ Words - beef, bench, box, brawn, brute

/l/ Words -

12 Beauty

/b/ Words - beau, beaut, belle

/l/ Words -

13 Party, Celebration, Gathering

/b/ Words - bake, ball, bash, bee, blast

/l/ Words -

B1 Barriers, Interference

1 Impediments

/b/ Words - balk, ban, band, bank, bar, barb, bate, bay, bib, bit, bitch, blind, block, bluff, bog, boom, boot, brake, brig, bund, bung

/l/ Words - law, lid

2 Boundaries

/b/ Words - bank, bar, beach, belt, blank, bluff, bound, break, breath, brim, brink, brow, brunt

/l/ Words - lip

3 Interfere (transitive)

/b/ Words - bag, ban, bar, bate, bench, bend, bilk, bind, blank, blind, block, blot, bluff, blunt, blur, bog, bolt, boss, bounce, bout, brake, breach, break, brook, brush, buck, buff, bug, bump, butt

/l/ Words - lock

4 Stop, Wait (intransitive)

/b/ Words - bait, balk, bate, bear, bend, bide, bilk, brace, brake, break, brew, brook, buck

/l/ Words - lag, lapse

5 Other Barriers

/b/ Words - back, blink, blunt, boo, brief, but

/l/ Words - lame, lee

C1 Emptiness

1 General Emptiness

/b/ Words - back, bail, bald, bare, blah, bland, blank, bleak, blob, bush, bye

/l/ Words - lack, Lent

2 Empty Talk

/b/ Words - bilge, blab, bluff, bore, bosh, bull, bunk

/l/ Words -

3 Empty Sight, Color

/b/ Words - black, blanch, blank, bleach, bleak, blear, blind, blink, blip, block, blot, blur

/l/ Words -

4 No Money

/b/ Words - bounce, break, broke, bum, bust

/l/ Words -

Related /l/ Words

lank, leach, lean, least, less, lone, lorn, lose, loss, lull

D1 Binding, Contact, Connection

1 Bind

/b/ Words - band, bind, blend, bond, bound, bunch, bund

/l/ Words - lash

2 Relationships

/b/ Words - beau, blood, bond, both, breed, bride

/l/ Words -

3 Fasten

/b/ Words - bar, baste, belt, bolt, bow, brace, braid

/l/ Words - lash, latch, lead, leash, link, lock, lodge

4 Connect

/b/ Words - braze, bridge

/l/ Words - link

5 Other Binding

/b/ Words - braid, bring, buzz

/l/ Words - lace, lane, like, loom, lure

E1 Foundations, Carrying and Balance

1 Base

/b/ Words - back, bank, base, bed, bench, block, boost, brunt, bulk

/l/ Words - land

2 Carrying

/b/ Words - back, bag, barge, bear, bike, boost, box, bra, brace, bridge, bring, brook, brunt, bulk, bus

/l/ Words - lade

3 Float, Bounce

/b/ Words - ball, bank, bath, bathe, beach, bilge, birl, blimp, bloat, boat, bob, boil, bounce, bound, breach, breeze, buck, bulge, bump

/l/ Words -

5 By, Things Which Adjoin, Accompany

/b/ Words - back, bank, bark, beach, bench, bias, bis, boot, brace, brink, brunt, but, by

/l/ Words -

F1 Explosion, Blowing and Breaking

1 Explode

/b/ Words - barf, bash, belch, blast, blow, blurt, boil, bolt, bomb, boom, burp, burst, bust

/l/ Words -

2 Explosive Noise

/b/ Words - bam, bang, boom

/l/ Words -

3 Break, Cut, Dig

/b/ Words - barge, bark, binge, bite, blot, blow, bob, bore, brain, brake, branch, breach, break, bruise, bum, burn, bust

/l/ Words - lop, lynch, lyse

4 Blow

/b/ Words - belch, blast, bloat, blow, breath, breathe, breeze, burp, burst, bust

/l/ Words -

Related /l/ Words

lance, lathe, leak

F2 Departure

1 Departure

/b/ Words - back(off), bail(out), beat(it), blast(off), blow, board, bolt, book, boot, bounce, bow(out), break, brief, brush(off), buck, bus, butt(out), bye

/l/ Words - launch, leach, leak, leave, lose, loss

F3 Hitting, Battling, Games

1 Hit

/b/ Words - barge, bash, baste, bat, bate, bean, beat, belt, biff, bite, blow, bob, bolt, bomb, bonk, boot, bop, bounce, brain, bruise, brush, buck, budge, buff, bump, bung, bunt, bust, butt

/l/ Words - lash, lick

2 Battle

/b/ Words - beef, bitch, blitz, bout, box, brawl, broil

/l/ Words -

3 Collision Games

/b/ Words - bowl, box

/l/ Words -

F4 Bizarre and Chaotic

1 Bizarre

/b/ Words - beaut, bird, blitz, blue, bolt, boom, boon

/l/ Words -

Related /l/ Words

/l/ Words (Liberty) - lark, leave, let, lithe, loaf, loose, luck

G1 Noises and Music

1 Noises

/b/ Words - baa, bam, bang, bark, bawl, bay, beep, belch, bell, birr, blare, blast, bleat, bleep, blow, bomb, bong, boo, boom, brawl, bray, burp, burr, buzz

/l/ Words - laugh, loud

2 Music

/b/ Words - band, bar, bard, bass, beat, bell, belt, blue/s, bop, bow, brass, break

/l/ Words - la, lilt, lute

G2 Effusive Language and Writing

1 Effusive, Empty Talk

/b/ Words - bah, bilge, blab, bluff, blurb, boast, bore, bosh, bounce, brag, bull, bunk, buzz

/l/ Words -

2 Sudden Talk

/b/ Words - blurt, bolt

/l/ Words -

3 Praise

/b/ Words - bark, bis, bless, blow, blurb, boast, boost, brag

/l/ Words - laud

4 Blame

/b/ Words - barb, bash, baste, beef, bitch, blab, blame, blot, blunt, bode, book, bosh, boss, brand, bull, butt

/l/ Words - lip, lodge

5 Bargain

/b/ Words - bat, beard, bend, bet, bid, bill, bond, bout, brave, breeze, bribe

/l/ Words -

6 Ask, Force

/b/ Words - beck, beg, bend, bid, bill, boon, boss, bribe, bum

/l/ Words -

7 Exclamations

/b/ Words - bad, bah, bam, bang, bash, blah, blast, blaze/s, boo, boom, bosh, boy, bud, bull, bye

/l/ Words -

8 Other Language

/b/ Words - bode, brief, broach

/l/ Words - leak, lisp, lore

9 Writing

/b/ Words - banns, bill, blimp, blurb, bold, bond, book, braille, brief, browse, bull

/l/ Words - list, log

G3 Bother and Bargain

1 Bother

/b/ Words - barge, bite, blight, blitz, bore, bug, burn, bust, butt

/l/ Words -

2 Bargain

/b/ Words - bail, bet, bid, bill, bout, brave, bribe, buy

/l/ Words - lease, lend, lest, lien, lieu, loan

H1 Birth and Beginnings

1 Beginning

/b/ Words - bang, base, bear, birth, board, boost, boot, break, breed, bride, bring, brink, broach, burst

/l/ Words - launch

2 Birth

/b/ Words - bear, big(with child), birth, bloom, break, breed, by

/l/ Words -

3 Babies

/b/ Words - babe, bairn, bean, bloom, blow, boy, brood, bud, bulb, bur

/l/ Words -

4 Concerning the Future

/b/ Words - bait, bank, bate, beck, bent, bet, bid, bide, bill, bode, bond, bound, brace, brew, bribe, bring, brink, brood

/l/ Words - loom, luck, lurk

I1 Badness

1 Bad

/b/ Words - bad, bale, bane, base, black, bode

/l/ Words - low

2 Bad Person

/b/ Words - bawd, beast, bitch, boob, bore, boss, brag, brat, brute, bug, bull, bum

/l/ Words - louse, lout

3 Disparage

/b/ Words - ban, barb, blab, blame, blot, book, brand

/l/ Words -

Related /l/ Words

lewd, lie

I2 Pain

1 Sorrow

/b/ Words - bawl, bear, blah, bleak, blear, blue, bum, bust

/l/ Words - lorn, loss

2 Injury, Illness

/b/ Words - barf, bawl, bend/s, bite, bleed, blight, blood, blotch, boil, bruise, bung, burn

/l/ Words - lame, lisp

3 Crime and Deceit!!!

/b/ Words - bait, bilk, bluff, breach, bribe

/l/ Words - lie, loot

4 Anger

/b/ Words - bile, bitch, black, blast, blaze, blow, boil, brew, broil, burn

/l/ Words - loathe

6 Other Pain

/b/ Words - beef, bitch, bite, break

/l/ Words - loath

I3 Error

1 Error

/b/ Words - balk, bilge, blot, blotch, blow, botch, bounce, bug, bull, bum, bunk, burn

/l/ Words - leak, lose

2 Clumsy Person

/b/ Words - boob, boor

/l/ Words -

3 Defeat and Belittle

/b/ Words - bah, beat, bitch, blast, blot, blow, bomb, bosh, bounce, bull, bunk, burn

/l/ Words -

J1 Water

1 Bodies of Water

/b/ Words - bay, beck, bed, blue, bog, branch, brine, brook

/l/ Words - lake, loch, lock (canal)

2 Waves

/b/ Words - bore, breach, break

/l/ Words - lap

3 Containers for Liquid

/b/ Words - balls, bilge, boob, bowl, breast, bust, butt

/l/ Words -

4 Water Borders, Barriers

/b/ Words - bank, beach, bench, bight, bluff, brim, brink, bund, bung

/l/ Words -

5 Body Fluids

/b/ Words - bawl, bead, bleed, blood

/l/ Words - lymph

6 Float

/b/ Words - bail, bath, bathe, birl, bloat, bob, breach

/l/ Words -

8 Blotches

/b/ Words - bleed, blob, blot, blotch, blur

/l/ Words -

9 Drink, Soup

/b/ Words - baste, beer, belt, bib, boil, booze, borscht, brace/r, brew, broth, brut

/l/ Words - lap, lick

10 Boats

/b/ Words - barge, bark, boat, brig

/l/ Words -

11 Water Animals

/b/ Words - barb, bass

/l/ Words -

12 Basking, Pampering, Washing

/b/ Words - baby, bake, balm, bare, bask, baste, bath, bathe, beach, beam, birch

/l/ Words - leach

13 Other Water

/b/ Words - bilge, bleach, blend, brush

/l/ Words - leak

J2 Alcohol

1 Alcohol

/b/ Words - back, bar, beer, belt, bend/er, bib, binge, blind, booze, bout, brace/r, brawl, brew, broach, brut, buzz

/l/ Words -

J3 Boats

1 Boat Words

/b/ Words - bag, bank, barge, bark, beach, beam, bee, belt, bench, bend/s, berth, bilge, bill, board, boat, boom, bow, box, brace, bridge, brig, broach, bulge, bulk, bunt

/l/ Words - log

K1 Fire, Light

1 Fire

/b/ Words - bake, blaze, boil, bolt, braise, brand, brew, broil, broth, burn

/l/ Words -

2 Light

/b/ Words - balm, bask, beam, blitz, brand, braze, bright, bulb

/l/ Words - lamp, lase, lens, light

K2 Saturated Color

1 Black and Blue

/b/ Words - black, blue

/l/ Words -

2 Brown

/b/ Words - bark, bay, beech, beige, bole, bronze, brown, bruise, buff

/l/ Words -

3 Bright

/b/ Words - blanch, blank, blaze, bleach, blond

/l/ Words - loud

4 Blush

/b/ Words - bloom, blush

/l/ Words -

L1 Boards and Bricks

1 Stick, Board

/b/ Words - balk, bar, bat, bead, beam, birch, birl, blade, bloom, board, bone, boom, bough, brace, branch

/l/ Words - limb

2 Other Building Materials

/b/ Words - block, bolt, brick

/l/ Words -

/l/ Related Words

lac

Other /l/ Words

Little: least, less, light, lint

Lead, Late, Follow: last, late, lax, lead, left, lest, lorn

Land: land, lawn, lea, loam

Fall, Lay: land, lay, lean, leap, lie, **lode**, log, low, lug

Launch: **launch**, leap, lunge, lurch

Lazy/Limp: limp, lithe, loaf, loll, **loose**, lop, lounge, **lull**

Lift: leap, lift, **load**, lob, loft

To the Side: lean, left, limp

Flat: lawn, lay, leaf, ledge, lie

Get, Eat, Take, See: lap, learn, leech, leer, lick, **look**, **loot**, lunch

Run/ Walk/ Jump: **lap**, leap, **leg** (of a race), lick, lilt, **limp**, look, lope, lug

Long: lane, **lead**, **leash**, limb, line, **list**, **log**, **long**, **lore**

Leg: leg, limb, loin

Happy: life, lift, light

Attraction: like, love, **lure**, **lust**

Life: life, live, live

lewd, lie (fib), like (similar), loom, lunge

Concrete Nouns: lab, lac, lad, lair, lamb, larch, lark, lass, lead (metal), leaf, leech, leek, liege, lime,

loge, loon, louse, lox, lune, lung, lye, lymph, lynx

Appendix V

Verbs of Motion with the Legs Walking, Running, Stepping and Jumping

/H/, /z/, /Z/, /f/, /T/, /S/

no verbs of motion on foot contain these phonemes

/b/

1. bound

/d/

1. dance

F3. bound, plod, pound, stride, tread, wade, wend

/g/

F3. jog, slog

/p/

1. pace, plod, pound, prance

2. sprint

F3. creep, lope, limp, romp, skip, stamp, step, stomp, tamp, tramp, trip, tromp, troop

F3. hop, jump, leap, skip, spring

/t/

1. tamp, tramp, tread, trek, trip, tromp, troop, trot

2. stamp, steal, step, stomp, stray, stride, stroll, strut

F2. waltz

F3. skate, sprint, strut, trot

/k/

1. crawl, creep

2. scale, skate, ski, skip

F3. hike, trek

/v/

F3. rove

/s/

1. scale, skate, ski, skip, slog, sprint, stamp, steal, step, stomp, stray, stride, stroll, strut

F3. dance, pace, prance, trounce, waltz

1. skip, spring

/h/

1. hike, hop

/J/

1. jump

F3. trudge

/C/

1. march

/m/

1. march

F2. jump, limp, romp, stamp, stomp, tamp, tramp, tromp

F3. roam

/n/

F2. bound, dance, pound, prance, trounce, wend

/G/

F3. spring

/l/

1. leap, limp, lope

2. plod

F1. waltz

F3. scale, steal, stroll, crawl

/r/

1. roam, romp, rove, run

2. crawl, creep, prance, tramp, tread, trek, trip, tromp, troop, trot, trounce, trudge

3. spring, sprint, stray, stride, stroll, strut

F2. march

/w/

1. wade, walk, waltz, wend

/j/

F3. ski, stray

Appendix VI

The Bias in the Labials

The following semantic classes exhibiting a labial 'bias' will be discussed:

Bulges, Mountains, Humps and Peaks
Fountains and Blowing
Foundations
Beginnings
Pairs, Names, Pictures, Symbols

Bulges, Mountains, Humps and Peaks Bulges, Humps, Mounds: Connected to a Surface

Initial Position

/b/ - bloat, blouse, bug(eye), bulge, bump, bunch, butte
/p/ - pass, peak, pile, purse, pyre
/m/ - mound, mount
/w/ - wake, wall, warp, wart, wave, wax, well, welt

2nd Position.

/r/ - crag, crest

Prefinal Position

/m/ - bump, hump, lump, mump/s, stump
/r/ - purse, warp
/w/ - bloat, boil, dome, knoll, lobe, mound, mount

Final Position

/b/ - knob, lobe, neb, nib, nub, tab
/p/ - alp, bump, heap, hump, lump, mump/s, nap, nip, step, stump, warp
/v/ - wave
/m/ - dome
/r/ - pyre

Body Parts

/b/ - ball/s, boil, boob, breast, bum, bun, bust, butt
/p/ - rump
/m/ - mole, rump
/r/ - horn, rear, rump, wart
/w/ - boob, horn, mole

Plant Parts

/b/ - blow, birl, boll, bud, burl
/r/ - birl, bur, gnarl, knurl
/w/ - blow, boll

Fat

/b/ - blimp, flab
/p/ - paunch, pig, plump, pork, port, pot, blimp
/f/ - fat, flab
/r/ - port

Percentages of words in above table which contain:

/b/ - 41%, /p/ - 34%, /v/ - 1%, /f/ - 3%, /m/ - 19%, /r/ - 25%, /w/ - 42%
Monosyllabic 'bump' words which do not contain a labial: hill

Some Observations:

- All the 'fat' words contain a /p/ or an /f/.
- All the /w/ words in this class involve motion, and most of these refer to some aspect of waves on the water.
- The appearance of fricatives (/f/ and /v/) in this class is limited.
- All the /m/ words in this class also contain either /w/ or /p/.
- All the /r/ words in this class contain /k/ or /p/.

Round Words

Initial Position

/b/ - bale, ball, bay, bead, bell, blimp, blip, blob, blotch, bowl, bulb
/p/ - pea, pearl, pill, pip, pit, plate, pock, pod, point, pore, puck
/r/ - reel, ring, rink, roll, round, wrap, wreath, wrench, wrest, wring, wrist
/w/ - waist, wheel, whirl, whorl

2nd Position

/p/ - spin, spool
/r/ - drill
/w/ - swing, swirl, twirl, twist

3rd Position

/r/ - screw, scroll, spring

Prefinal Position

/m/ - blimp
/r/ - arc, arch, cirque, curl, earth, gear, girth, orb, pearl, swirl, torque, turn, twirl, whirl, whorl, world
/w/ - bowl, coil, coin, cone, dome, globe, hole, hoop, loop, noose, orb, pore, roll, round, scroll, slouch

Final Position

/b/ - blob, bulb, glob, globe, knob, lob, lobe, loop, orb
/p/ - blimp, blip, drop, glop, grape, loop
/m/ - dome
/r/ - gear, knurl, spire, spur
/w/ - screw

Percentages of words in above table which contain:

/b/ - 14%, /p/ - 30%, /v/ - 0%, /f/ - 0%, /m/ - 3%, /r/ - 48%, /w/ - 30%
Monosyllabic 'round' words which do not contain a labial: disk.

Some Observations:

- If /b/ or /p/ are in the word, the roundness will tend to refer to a more simple, singular shape. If /r/ or /w/ is in the word, the roundness will tend to be reflected in a motion. If /w/ appears in the word, the motion will tend to be freer. If /r/ appears in the word, the motion will tend to be driven. Other sounds in the word also contribute to the roundness. /b/ almost always requires an /l/ to become round. /p/ does not require /l/ to become round, and /p/'s roundness tends to be small and hard unless it is softened by /l/ or /r/.

Curves and Ripples

Initial Position

/b/ - bay, bend, bight, bilge, bow, bowl
/p/ - plait, pleat, press, purl, purse
/v/ - vault, veer
/f/ - flare, flounce, flute, fold, frill, furl
/r/ - rill, rock, roll, row, write, writhe
/w/ - wad, wag, wake, wale, wall, warp, wave, wax, weave, web, weft, well, wend, whip, whirl, whorl, wick, worm, woof, worst/ed

2nd Position

/r/ - crease, frill, press
/w/ - swab, swap, swash, swat, sway, sweep, swell, swerve, swing, swipe, swirl, swish, swoop, twirl

3rd Position

/w/ - squirm

Prefinal Position

/p/ - apse
/f/ - weft, woof
/m/ - clump
/r/ - arc, arch, cirque, curl, curve, furl, girth, gnarl, knurl, purl, purse, squirm, swerve, swirl, turn, twirl, warp, whirl, whorl
/w/ - bowl, cove, flounce, fold, loop, roll

Final Position

/b/ - lob, lobe
/p/ - clump, cusp, leap, loop, warp
/v/ - cove, curve, swerve, wave, weave
/m/ - squirm, worm
/r/ - flare, gear, spire, spur, veer
/w/ - bow, row

Percentages of words in above table which contain:

/b/ - 15%, /p/ - 21%, /v/ - 9%, /f/ - 10%, /m/- 4%, /r/ - 41%, /w/ - 55%
Monosyllabic curvy/ripply words which do not contain a labial: hunch, kink, sag, tuck

Some Observations:

- If the word contains a /w/, /l/ or an /r/ before the vowel, the wave or ripple can be multiple. Otherwise it is almost always a single curve or loop.
- The pleats in /p/ tend to be flatter and tighter than the bows and bends in /b/. The folds in /f/ tend to be softer than the curves in /v/. Unvoiced sounds seem to be more compressible than voiced sounds.

Leap, Jump, Bounce, Rise

Initial Position

/b/ - bank, bob, boil, boost, bounce, bound, breach, buck, bump
/p/ - pounce, prime, pump, pop
/v/ - vault
/f/ - float, flounce, fly
/m/ - mount
/r/ - rake, raise, ramp, reach, rear, right, rise, roof, rouse

2nd Position

/p/ - sprout

/r/ - breach, crane, grow

3rd Position

/r/ - sprout

Prefinal Position

/f/ - lift, loft

/m/ - bump, jump, pump

/w/ - boil, bounce, bound, float, flounce, jounce, loop, mount, pounce, roof, rouse, sprout

Final Position

/b/ - bob

/m/ - bump, hop, jump, leap, loop, pop, pump, step, up

/f/ - roof

/m/ - climb, prime(v)

/w/ - grow

Percentages of words in above table which contain:

/b/ - 25%, /p/ - 32%, /v/ - 3%, /f/ - 15%, /m/- 18%, /r/ - 35%, /w/ - 33%

Monosyllabic bouncing or rising words which are not in this table: jack, dance, stand

Some Observations:

- Those containing /b/, /p/ and /w/ tend to be bouncy, whereas those containing only /f/ and /r/ are not.
- Those containing /r/ maintain a connection to the ground, whereas those containing only /f/ do not.
- Those containing /p/ tend to be intentional, whereas those containing only /b/ are usually not.

Branches, Puffs, Fizzes

Initial Position

/b/ - barb, beard, bosk, brake, braid, branch, broom, brush, bur, burr, bush

/p/ - pile, pine, plume, puff

/f/ - felt, fern, fir, flax, fleece, floss, fluff, foam, frappé, fray, frieze, frill, frizz, frond, frost, fur, fuzz

/m/ - muff

/r/ - rough, ruff

2nd Position

/r/ - braid, brake, branch, broom, brush, frappé, fray, frieze, frill, frizz, frond, frost, grass, shrub, tree

Prefinal Position

/f/ - tuft

/r/ - barb, beard, fern

/w/ - bloom, broom, plume

Final Position

/b/ - barb, shrub

/p/ - nap

/f/ - fluff, muff, puff, rough, ruff

/m/ - bloom, broom, comb, foam, palm, plume, scum

/r/ - bur, burr, fir, fur, hair

Percentages of words in above table which contain:

/b/ - 35%, /p/ - 16%, /v/ - 0%, /f/ - 60%, /m/- 14%, /r/ - 58%, /w/ - 7%

Monosyllabic fuzzy or branchy words which do not contain a labial: N/A

Some Observations:

- Almost all these words contain either /b/, /p/ or /f/.
- None of these words with the exception of 'hair' contains a velar consonant.
- When the word contains /b/ the texture is not as fine. Nearly all the fizzy and fuzzy words contain an /f/. The words involving moisture generally contain an /f/. If similar words refer to something wet but do not contain an /f/, the texture tends to be homogeneous: mushy and not fizzy.

Ramps, Cliffs

Initial Position

- /b/ - bluff
- /p/ - prone, prop
- /r/ - ramp

2nd Position

- /p/ - sprit
- /r/ - crag, crest, grade, prone, prop

3rd Position

- /r/ - scree, sprit

Prefinal Position

- /m/ - ramp
- /r/ - arch, gorge, scarp

Final Position

- /p/ - prop, ramp, scarp, slope, steep, step, stoop, up
- /f/ - bluff, cliff, gulf
- /r/ - sheer, stair

Percentages of words in above table which contain:

/b/ - 5%, /p/ - 44%, /v/ - 0%, /f/ - 18%, /m/ - 5%, /r/ - 64%, /w/ - 0%

Monosyllabic incline words which do not contain a labial: cant, cline, hill, lean, scend, slant, slide

Some Observations:

- All these words contain either /r/, /p/ or /f/. Those containing /f/ refer to a dead drop rather than an incline.
- Words referring to inclines or cliffs which do not contain a labial contain either /l/ or /n/.

Some Wavy/Curvy Phonesthemes

- **bl** - force pressing out from within
- **bVI**: bale, ball, belch, bell, bilge, boil, boll, bowl, bulb, bulge, burl
- **bIV**: blimp, blip, bloat, blob, blotch, blouse, blow
- **IVb**: flab, glob, globe, lob, lobe
- **nV[b,p]** - **smallish**: knob, neb, nib, nub, nap, nip
- **ump** - **solid interior**: bump, clump, hump, lump, mump/s, plump, rump, slump, stump
- **nch** - **compressed against resistance**: bunch, cinch, clench, clinch, conch, crunch, flinch, haunch, hunch, inch, munch, pinch, punch, scrunch, winch, wrench
- **rl** - **curled**
- **Vrl**: birl, burl, curl, furl, gnarl, knurl, purl, swirl, twirl, whirl, whorl
- **rVI**: drill, rail, rill, roll, scroll, trill
- **IV[b,p]** - **loop**: blimp, blob, clump, flab, flap, flip, flop, glob, globe, lob, lobe, leap, lip, loop, lope, sloop, slump

- **k - corner, kink** : arc, check, cleft, coil, coin, cone, crease, crook/ed, cross, curl, curve, cusp, disk, dukes, flex, fork, hook, keel, kink,nock, pike, screen, screw, scroll, skein, skew, torque, tuck

Summary

Almost all the monosyllabic words in English referring to waves and bumps contain a labial consonant. More than this, the nature of the bump or wave is fairly narrowly determined by the particular labial consonant in question. Certain types of meanings apparently become impossible when other consonants are around. For example, fuzziness does not occur in the presence of velar consonants.

The only monosyllabic words referring to bumps or waves which don't contain a labial consonant are: cant, cline, dance, gush, hill, hunch, jack, kink, lean, sag, scend, slant, slide, stand, tuck

Consonant Percentages in Monosyllabic 'Bumpy' Words

Total Words: 298 Total Monosyllables: 3425 Percent: 8.7%

<u>Consonant</u>	<u>b</u>	<u>p</u>	<u>f</u>	<u>r</u>	<u>w</u>	<u>l</u>	<u>s</u>	<u>t</u>	<u>n</u>	<u>m</u>	<u>v</u>
# Bumpy	81	97	46	128	107	99	87	68	49	33	8
Total # 373	532	333	1008	858	798	858	797	560	396	109	
% Bumpy	22%	18%	14%	13%	12%	12%	10%	8%	8%	8%	7%

<u>Consonant</u>	<u>y</u>	<u>ng</u>	<u>k</u>	<u>g</u>	<u>sh</u>	<u>h</u>	<u>ch</u>	<u>j</u>	<u>d</u>	<u>z</u>	<u>th</u>
# Bumpy	64	8	48	17	10	10	12	7	24	6	1
Total # 927	106	698	278	158	156	187	133	431	115	93	
% Bumpy	7%	7%	7%	6%	6%	6%	6%	5%	5%	5%	1%

<u>Consonant</u>	<u>dh</u>	<u>zh</u>
# Bumpy	0	0
Total # 33	5	
% Bumpy	0%	0%

This table includes 'y' and 'w' as glides in a long vowel.

If post-vocalic glides /w/ and /j/ are included, then 96% of the 298 English monosyllabic 'bumpy/wavy/folded' words contain a labial, but only 68% of English monosyllables in general contain a labial. If post-vocalic glides /w/ and /j/ are not included, then 54% of consonants in the English monosyllabic 'bumpy' words are labials as opposed to 34% in the general monosyllabic vocabulary.

Fountains and Blowing Fountains, Pops, Bombs

Initial Position

/b/ - bam, bang, barf, bash, belch, blast, bloom, blow, blurt, boil, bolt, bomb, boom, burp, burst, bust
/p/ - pip, plash, pop, pow
/v/ - vent
/f/ - fart, flue, font, fount

2nd Position

/p/ - spark, spew, spill, spit, splash, splay, splotch, spot, spout, spray, spread, spring, sprout, spume, spurt

3rd Position

/r/ - spray, spread, spring, sprout
/w/ - squirt

Prefinal Position

/r/ - barf, barge, burp, burst, fart, snort, spark, spurt, squirt
/w/ - bolt, bloom, boom, fount, spout, sprout, spume

Final Position

/p/ - burp, pip, pop
/f/ - barf, cough
/m/ - bam, bloom, bomb, boom, come
/w/ - blow, flue, pow, spew

Percentages of words in above table which contain:

/b/ - 33%, /p/ - 41%, /v/ - 2%, /f/ - 10%, /m/ - 11%, /r/ - 35%, /w/ - 12%
Monosyllabic exploding or fountain words which do not contain a labial: gush

Some Observations:

- With the exceptions of 'squirt' and 'snort', all the words in the table contain either /b/, /p/ or /f/. Except in the case of 'cough', /b/, /p/ or /f/ must appear before the vowel.
- If the word contains /l/, /r/ or /s/ then the explosion involves light or fire that spurts forth from an opening. Otherwise the explosion is generally a bomb-like rupture of an object in its entirety.
- The explosions involving /b/ are more violent than those involving /p/ and generally less intentional. Those involving /f/ are generally due to natural causes.

Blowing, Dropping, Falling, Flying

Initial Position

/b/ - barf, bam, bang, belch, blast, blow, blurt, bolt, bomb, boom, breath, breathe, breeze, burp, burst, bust
/p/ - pass, pee, piss, pitch, plash, plop, plump, plunge, plunk, pooh, poop, pop, pour, pow, puke, punt, vent
/f/ - faint, fall, fart, fell, fill, flash, flap, flee, flight, flip, flit, float, floe, flood, floor, flop, flow, flume, flush, fly
/r/ - raft, rain, roar, row, run, rush
/w/ - waft, wail, wheeze, whiff, whip, whirl, which, whisk, whiz, whoop, whoosh, wind(v), wisp

2nd Position

/p/ - spark, spawn, spend, sperm, spew, spill, spit, splash, splat, splay, spleen, split, splotch, spore, spout, sprawl, spray, spread, spring, sprout, spume, spurt
/r/ - breathe, breeze, draft, drain, drape, draw, drench, drift, drip, drool, droop, drop, trade
/w/ - swash, sweep, swish, swoon

3rd Position

/r/ - spray, spread, spring, strain, stream, strew

Prefinal Position

/f/ - draft, drift, lift, loft, raft, shift, sift, waft

/r/ - barf, burp, course, fart, forth, snort, spurt, squirt, storm

Final Position

/p/ - crap, drape, drip, droop, drop, dump, flip, flop, glop, plop, poop, pop, scrap, seep, slip, slop, slump, stoop, swoop, tip, trip, weep, wipe(out)

/v/ - dive

/f/ - barf, cough, off, sniff, snuff, whiff

/m/ - bloom, bomb, come, steam, storm, stream

/r/ - oar, pour, soar, tear

/w/ - blow, floe, flow, fro, row, shoo, snow, sow, spew, strew, throw, to

Percentages of words in above table which contain:

/b/ - 12%, /p/ - 42%, /v/ - 1%, /f/ - 23%, /m/ - 9%, /r/ - 53%, /w/ - 21%

Monosyllabic blowing words which do not contain a labial: N/A

Some Observations:

- Most of the /b/ words are explosive. The /p/ words either start from a point (initial), pass through a point (second), or land at a point (final). The /f/, /m/, /w/ and /b/ words have an involuntary or uncontrolled quality about them. Those containing /b/ are more violent and explosive. Those containing /f/ tend to flow or float on air or water or to fall.

Consonant Percentages in Monosyllabic 'Fountain/Blowing' Words

Total Words: 160 Total Monosyllables: 3425 Percent: 4.7%

<u>Consonant</u>	<u>p</u>	<u>f</u>	<u>sh</u>	<u>l</u>	<u>s</u>	<u>t</u>	<u>r</u>	<u>b</u>	<u>w</u>	<u>n</u>	<u>m</u>
# Blowy	66	39	11	48	55	44	54	20	37	21	14
Total # 532	333	158	798	858	797	1008	373	858	560	396	
% Blowy	12%	12%	7%	6%	6%	6%	5%	5%	4%	4%	4%

<u>Consonant</u>	<u>d</u>	<u>z</u>	<u>th</u>	<u>dh</u>	<u>v</u>	<u>ng</u>	<u>ch</u>	<u>j</u>	<u>y</u>	<u>k</u>	<u>h</u>
# Blowy	17	3	3	1	2	2	4	2	13	10	0
Total # 431	115	93	33	109	106	187	133	927	698	156	
% Blowy	4%	3%	3%	3%	2%	2%	2%	2%	1%	1%	0%

<u>Consonant</u>	<u>g</u>	<u>zh</u>
# Blowy	1	0
Total # 287	5	
% Blowy	0%	0%

This table includes 'y' and 'w' as glides in a long vowel.

If post-vocalic glides /w/ and /j/ are included, then 99% of the 160 English monosyllabic 'fountain/blowing' words contain a labial, but only 68% of English monosyllables in general contain a labial.

Foundations Foundations

Initial Position

/b/ - back, balk, bank, bar, base, beam, bed, bier, block, bloom, boost, bra, brace, brick, brook, brunt, bum, bun, bunk, butt
/p/ - pro, prone, prop
/f/ - fence, floor, font, form, frame, fret, frieze
/m/ - mast, mesh, mod, mode, mold, mood
/r/ - rack, raft, rail, ramp, rest, rib, rig, rock, rod, roof, root, rung
/w/ - weft, woof

2nd Position

/p/ - spar, spine, splint, spoke, sprit, spur
/r/ - bra, brace, brick, brook, brunt, crane, crust, crutch, frame, graph, grid, grill, grille, grip, ground, pro, prone, prop, thrust, tray, trunk, truss

3rd Position

/r/ - sprit, strut

Prefinal Position

/f/ - weft
/m/ - stamp
/r/ - arch, arm, board

Final Position

/b/ - cob, rib, sub, web
/p/ - grip, lap, prop, ramp, step, stipe
/f/ - clef, graph, staff, woof
/m/ - beam, bloom, bum, cam, clime, form, frame, heme, home, jamb, limb, loom, stem, theme, womb
/r/ - bar, bier, floor, gear, spar, stair

Percentages of words in above table which contain:

/b/ - 24%, /p/ - 15%, /v/ - 0%, /f/ - 12%, /m/ - 22%, /r/ - 43%, /w/ - 2%

Monosyllabic foundation words which do not contain a labial: **ass, chock, hinge, jack, neck, seat, sill, stalk, stand, stock**

Some Observations:

- There's a phonestheme for support in /s/ as well. It is related to the strength of /s/. /k/ in final position also can cling to something to serve as a foundation. In /h/ there's a large class for hampering and hindering. What is specifically emphasized in the labials is a base or foundation, not a catching, grabbing or holding, which occurs in the velars. The labials bear the weight of something which is already under pressure, whereas the velars in general drag something toward themselves using their own force. When the word contains a labial, the burden is typically on top. When it contains a labial, the weight is typically downward or out in front.
- The beams and blooms of /b/ are in general much heavier than the spokes and spars of /p/. Those in /f/ carry no weight at all, but only provide an outline, a fence, graph or clef. On the other hand, /m/ serves as a mold or climate which doesn't simply outline or serve as a background, but which pervades (final position) or is filled entirely by (initial position) something else. /r/ differs from /b/ in that it generally supports something that is in motion, whereas in /b/, it is generally static.
- The labials /v/ and /w/ do not seem to serve as foundations. And /f/ only outlines, but does not carry weight.

Bearing, Floating

Initial Position

/b/ - bath, bathe, bear, boat, bob, boil, boost, bound, breach, bridge, bring, brook, bus

/p/ - peel, plow, plumb, plunge, pool, prime, pull, pulse, pump

/f/ - flap, fleet, flight, flit, float, floe, fly

/m/ - mount, move

/r/ - raft, ride, roll, row

2nd Position

/p/ - sponge, spot

/r/ - bridge, bring, brook, draft, draw, drive, freight, prime, trawl, troll, truck

Prefinal Position

/f/ - draft, drift, lift, loft, raft, waft

/m/ - pump

/r/ - board, cart, surf, turn

Final Position

/p/ - grip, keep, mop, pump, sap, schlep, scoop, sweep, swipe

/v/ - drive, heave, move, shove

/m/ - prime, scum, skim, steam, stream, swarm, swim, tram

/r/ - bear, oar, steer

Percentages of words in above table which contain:

/b/ - 22%, /p/ - 32%, /v/ - 7%, /f/ - 22%, /m/ - 18%, /r/ - 37%, /w/ - 0%

Monosyllabic bearing/floating words which do not contain a labial: N/A

Some Observations:

- Those words in this class which contain /f/ generally concern flying or floating on air or water. Those containing /b/ and /p/ imply that the subject of the verb is carrying weight or applying force. In words containing /b/, the force is generally greater. /p/ tends to appear in words of pulling or pumping in which the object is brought toward the subject of the sentence. With /b/, the motion tends to be carrying, often to or for someone else. When /r/ is in second position, the subject is generally also actively exerting a force. When /r/ is in other positions, the subject is riding or steering something which is self-driven.

Hub, Crux, Meat

Initial Position

/b/ - back, base, brunt, bulk

/p/ - peak, pit, pith, point, pole, prime, punch

/f/ - foot, force

/m/ - main, mean, meat, mid, midst, might

/r/ - real, right, root

/w/ - womb

2nd Position

/r/ - breast, brunt, crest, cross, crown, crux, thrust, true, trump

/w/ - quick

3rd Position

/r/ - stress

Prefinal Position

/m/ - trump

/r/ - heart, norm, source

Final Position

/b/ - cob, hub, nub

/p/ - cusp, trump
/v/ - nave
/f/ - half, self
/m/ - come, home, norm, prime, stem, womb
/r/ - core, here
/w/ - now

Percentages of words in above table which contain:

/b/ - 13%, /p/ - 17%, /v/ - 2%, /f/ - 8%, /m/- 25%, /r/ - 35%, /w/ - 6%

Monosyllabic crux words which do not contain a labial : gist, heat, height, seat

Some Observations:

- All the words in this class which do not contain a labial end in /t/ and contain /h/ or /s/.

Help, Serve

Initial Position

/b/ - back, bear, bis, bless, boost
/p/ - pat, pet, patch, please, point, praise, preen, press, primp, prod, prompt
/v/ - vice
/f/ - feed, fix, fuel, fund
/m/ - man, meet, mend, mind(v)
/r/ - rah, raise, rise, root, round (applause), rouse
/w/ - wake, ward, watch, wive

2nd Position

/p/ - spare, speed, spoon, spruce
/r/ - drive, grace, grant, groom, praise, preen, press, primp, prod, prompt, train, treat

3rd Position

/r/ - spruce, stroke
/w/ - squire

Prefinal Position

/f/ - gift
/m/ - primp, prompt
/r/ - arm, charge, guard, nurse, serf, serve, spark, urge, ward

Final Position

/p/ - chip(in), help, keep, primp, stoop
/v/ - drive, give, save, serve, slave, wive
/f/ - serf, staff, wife
/m/ - groom
/r/ - bear, care, cheer, cure, rear, share, spare, squire, steer

Percentages of words in above table which contain:

/b/ - 7%, /p/ - 29%, /v/ - 11%, /f/ - 12%, /m/- 11%, /r/ - 57%, /w/ - 5%

Monosyllabic helping words which do not contain a labial: aid, ease, guide, heal, side(with), teach, shield

Some Observations:

- The vowel in all the exception words is long and ends in a /j/.
- The 'backing' /b/ words in this class have an semantic element of moral or physical support. Those containing /p/ are less powerful. Those in /v/ imply ongoing service, as opposed to one-time assistance as in /p/, and a kind of devotion not present in /b/. Those beginning with /f/ imply the fuel by which a project is nurtured, and in other positions, /f/ in general implies dependence, unlike /b/ and /p/, but not devotion, as in /v/. In /m/, the service is ongoing as in /v/ and /f/, but the servant is superior rather than inferior to the thing which is served... that is, the service in /m/

implies maintenance. In /r/, like in /v/, /f/ and /m/, the support is ongoing, but the supporter is neither superior nor inferior to the thing supported. The support in /r/ also implies a high level of activity and energy. In /w/, helpfulness primarily takes the form of watchfulness.

Consonant Percentages in Monosyllabic 'Foundation/Support/Base' Words

Total Words: 260 Total Monosyllables: 3425 Percent: 7.6%

<u>Consonant</u>	<u>m</u>	<u>b</u>	<u>f</u>	<u>r</u>	<u>p</u>	<u>v</u>	<u>t</u>	<u>s</u>	<u>n</u>	<u>d</u>	<u>l</u>
# Base	53	46	39	122	61	11	70	70	38	27	45
Total #	396	373	333	1008	532	109	797	858	560	431	798
% Base	13%	12%	12%	12%	11%	10%	9%	8%	7%	6%	6%

<u>Consonant</u>	<u>k</u>	<u>g</u>	<u>z</u>	<u>h</u>	<u>ch</u>	<u>j</u>	<u>y</u>	<u>sh</u>	<u>th</u>	<u>dh</u>
# Base	41	14	6	8	9	6	37	4	3	1
Total #	698	287	115	156	133	927	158	93	33	
% Base	6%	5%	5%	5%	5%	4%	3%	3%	3%	

<u>Consonant</u>	<u>ng</u>	<u>w</u>	<u>zh</u>
# Base	2	20	0
Total #	106	858	5
% Base	2%	2	0%

This table includes 'y' and 'w' as glides in a long vowel.

If post-vocalic glides /w/ and /j/ are included, then 93% of the 260 English monosyllabic 'foundation/support' words contain a labial, but only 68% of English monosyllables in general contain a labial.

Beginnings **Beginning (Past)**

Initial Position

/b/ - back, bang, base, bear, birth, board, boost, boot, branch, break, breed, bride, bring(up), brink, broach, burst

/p/ - pass, past, perk, plant, plunge, press, prod, prompt, prow, push

/v/ - verge

/f/ - farm, feed, first, fledge, foot, fore, forge, form, forth, found, frame, fresh, fro, from, front, fruit, fund

/m/ - mark, mint(a), mod, mount, move

/r/ - raise, rise, root, rouse

/w/ - once, was, were, when, while, whilst, would

2nd Position

/p/ - spark, spawn, speed, sperm, spore, spring, sprout

/r/ - branch, break, breed, bride, bring(up), brink, broach, craft, draft, draw, drive, frame, fresh, fro, front, fruit, grail, greet, ground, press, prod, prompt, prow

3rd Position

/r/ - scratch, screw, spring, sprout, strike

Prefinal Position

/m/ - prompt

/r/ - birth, board, burst, erst, first, forge, forth, germ, morn, perk, serve, source, spark, sperm, spurt, start, surge, urge, verge

/w/ - youth

Final Position

/v/ - eve, delve, dive, move, of, serve, shove

/m/ - come(up), dream, drum, form, frame, from, home, sperm, stem, womb

/r/ - bear, cheer, dare, ere, fore, hoar, lore, spore, sperm, spur, stir, were, yore

/w/ - bow, brow, fro, new, now, prow, show, sow, throw, to

Percentages of words in above table which contain:

/b/ - 14%, /p/ - 15%, /v/ - 1%, /f/ - 15%, /m/- 14%, /r/ - 53%, /w/ - 16%

Monosyllabic beginning words which do not contain a labial: cause, dawn, dig(in), hatch, launch, seed, young

Some Observations:

- Those containing /m/ involve the manufacture of a product. Those containing /r/ and /p/ concern bringing something into action. Those containing /p/ require a source of energy. They also contain the phonemes /s/, /r/ or /l/. The words containing /b/ generally refer to the beginning itself. Those beginning with /f/ refer to the fuel off of which the process feeds. Words containing /w/ concern time itself.

Preparations

Initial Position

/b/ - bait, bank, bate, bent(on), bet, bid, bide, bode, bond, bound, brace, braise, brew, bring, brink, broil, brood, brown

/p/ - plan, play, plot, ploy, preen, prep, prime, primp, proof, prop, prone

/v/ - verge, vote, vow

/f/ - feed, fledge, form, frame, fruit, fry, fuel

/m/ - make, mill, mint, mold, mount

/r/ - raise, rare/ing, rev, rig, rife, right, rile, ripe, root, rouse

/w/ - once, wake, wait, ward, warn, whet, will, would

2nd Position

/p/ - spread, spruce

/m/ - smith

/r/ - brace, braise, brew, bring, brink, broil, brood, brown, craft, cram, crank, crash, draft, draw, dread, dream, dress, frame, fruit, fry, grill, grit, groom, ground, group, grow, preen, prep, prime, primp, train, try

3rd Position

/r/ - screen, spread, spruce

Prefinal Position

/p/ - apt

/f/ - craft, draft

/m/ - primp

/r/ - arm, board, chart, forge, form, gird, learn, perk, thirst, warn

Final Position

/p/ - dope, help, hope, map, prep, primp, prop, ripe, shape, whip

/v/ - eve, pave, rev, save

/f/ - staff

/m/ - cram, doom, dream, drum, form, frame, groom, prime

/r/ - gear(up), hire, scare(up)

/w/ - brew, due, grow, owe, sue, sow, vow

Percentages of words in above table which contain:

/b/ - 17%, /p/ - 19%, /v/ - 6%, /f/ - 9%, /m/- 14%, /r/ - 51%, /w/ - 14%

Monosyllabic preparations words which do not contain a labial: check, teach, test

Some Observations:

- There is a phonestheme in /t/ which is similar semantically to the words referring to preparations containing labials. Those words in the /t/ class hint at or tends toward a future event, but do not actually prepare anything. Unlike the words containing labials, these /t/ words don't carry any burden or make any efforts. They merely suggest.
- The words containing voiced labials in this table involve more intensity or force than those containing unvoiced labials. The voiced labials are generally more physical and less mental than the unvoiced sounds.
- The planning words containing /p/ differ from the framing words containing /f/ in that they are more distanced from the actual manifestation. The /p/ words do not actually bring anything into being, but only think out how it might be. When you draft, form or staff, you are, however, actually beginning to provide the fuel. Those 'making' and 'smithing' words containing /m/ are usually even further into the process than those containing /f/.

Consonant Percentages in Monosyllabic 'Beginning' Words

Total Words: 211 Total Monosyllables: 3425 Percent: 6.1%

<u>Consonant</u>	<u>r</u>	<u>v</u>	<u>b</u>	<u>d</u>	<u>g</u>	<u>p</u>	<u>f</u>	<u>m</u>	<u>w</u>	<u>n</u>	<u>t</u>
# Begin	117	131	35	39	25	42	25	30	62	40	42
Total #	1008	109	373	431	278	532	333	396	858	560	797
% Begin	12%	12%	9%	9%	9%	8%	8%	8%	7%	7%	5%

<u>Consonant</u>	<u>z</u>	<u>th</u>	<u>s</u>	<u>j</u>	<u>sh</u>	<u>h</u>	<u>ng</u>	<u>ch</u>	<u>k</u>	<u>l</u>
# Begin	6	5	40	6	6	7	4	6	20	23
Total #	115	93	858	133	158	156	106	187	698	798
% Begin	5%	5%	5%	5%	4%	4%	4%	3%	3%	3%

<u>Consonant</u>	<u>y</u>	<u>dh</u>	<u>zh</u>
# Begin	25	0	0
Total #	927	33	5
% Begin	3%	0%	0%

This table includes 'y' and 'w' as glides in a long vowel.

If post-vocalic glides /w/ and /j/ are included, then 95% of the 211 English monosyllabic 'foundation/support' words contain a labial, but only 68% of English monosyllables in general contain a labial.

Pairs, Names, Pictures, Symbols
Pairs, Mates, Wives

Initial Position

/b/ - beau, both, bride
/p/ - pair, par, peer, per
/v/ - vice
/m/ - make, match, mate, meet, mid, mold
/r/ - right
/w/ - we, wed, wife, wive, with

2nd Position

/p/ - spare, spit/ting, spouse
/r/ - bride, draw, truce
/w/ - switch, twain, twelve, twice, twin

Prefinal Position

/f/ - left

Final Position

/b/ - sub
/v/ - halve, twelve, wive
/f/ - half, wife
/m/ - same, seem
/r/ - par, pair, peer, per, share, spare
/w/ - beau, thou, too, two, you

Percentages of words in above table which contain:

/b/ - 10%, /p/ - 17%, /v/ - 10%, /f/ - 7%, /m/- 19%, /r/ - 24%, /w/ - 36%
Monosyllabic Pair words which do not contain a labial: N/A

Dub, Print, Paint, Mold, Trace

Initial Position

/p/ - paint, pen, plaque, plot, pose, press, print
/f/ - form, frame
/m/ - make, map, mask, mean, mime, mint, mock, mold
/w/ - word

2nd Position

/p/ - spell
/r/ - draft, draw, graph, press, print, trac

3rd Position

/r/ - scrawl, scribe, script

Prefinal Position

/p/ - script, sculpt
/r/ - craft, draft
/m/ - stamp
/r/ - chart, word

Final Position

/b/ - dub, scribe
/p/ - map, scope, shape, stamp, tape, type
/m/ - form, frame, mime, name
/w/ - clue, cue

Percentages of words in above table which contain:

/b/ - 5%, /p/ - 25%, /v/ - 0%, /f/ - 5%, /m/- 33%, /r/ - 20%, /w/ - 8%

Monosyllabic imaging words which do not contain a labial: clone, sketch, sign

Some Observations:

- There are related phonesthemes in /k/ (copying) and /s/ (symbols). Many of these words therefore also contain /s/ and/or /k/.

Consonant Percentages in Monosyllabic 'Pair/Copy' Words

Total Words: 78 Total Monosyllables: 3425 Percent: 2.3%

<u>Consonant</u>	<u>m</u>	<u>v</u>	<u>p</u>	<u>dh</u>	<u>t</u>	<u>b</u>	<u>d</u>	<u>k</u>	<u>f</u>	<u>th</u>	<u>s</u>
# Copy	18	4	23	1	26	6	9	13	7	2	19
Total #	396	109	532	33	797	373	431	698	333	93	858
% Copy	5%	4%	4%	3%	3%	2%	2%	2%	2%	2%	2%

<u>Consonant</u>	<u>n</u>	<u>l</u>	<u>r</u>	<u>w</u>	<u>ch</u>	<u>sh</u>	<u>h</u>	<u>y</u>	<u>zh</u>	<u>ng</u>
# Copy	9	12	23	21	36	2	2	15	0	0
Total #	560	798	1008	858	187	158	156	927	5	106
% Copy	2%	2%	2%	2%	2%	1%	1%	1%	0%	0%

<u>Consonant</u>	<u>z</u>	<u>j</u>	<u>g</u>
# Copy	0	0	0
Total #	115	133	278
% Copy	0%	0%	0%

This table includes 'y' and 'w' as glides in a long vowel.

If post-vocalic glides /w/ and /j/ are included, then 97% of the 78 English monosyllabic 'pair/copy' words contain a labial, but only 68% of English monosyllables in general contain a labial.

Appendix VII

Words for Locations beginning with /b/ in Russian and English

The following words referring to place have been classified in both a phoneme-neutral way and in a manner intended to best accommodate words beginning with /b/.

English Location Words Beginning with /b/

Phonosemantic Classification

Backlogged/Boggy - babel, back, bay, bayou, blind, bog

Base/Bottom - base, basin, bottom, breech

Container/Storage/Building - bank, barn, barrack, belt, block, bode, booth, borough, bungalow, bunker, bureau

Bump/Bulge - bend, butte

Border - balcony, border, brink

Connection/Road - belt, bend, boulevard, bridge, by

Sex/Alcohol - bar, bed, berth, booth, boutique, brothel, bunk

Other - beat(police), bivouac, burg

Exceptions: 1%

Natural classification

Cosmic

Geographical - barn, basin, bay, bayou, belt, bend, blind, block, bog, border, bottom, bridge, brink, butte

Political - borough, burg

Streets - boulevard

City Part - beat

Home - barrack, base, bivouac, bode, bungalow, bunker

Institutions/Businesses - bank, bar, booth, boutique, brothel, bureau

Building Part - balcony

Direction - back, breech, by

Furniture - bed, berth, bunk

Other - babel

Exceptions: 3%

English Location Words Beginning with /g/

Phonosemantic Classification for /b/ Words

Backlogged/Boggy - gulf, gutter?

Base/Bottom - ground, grave

Container/Storage/Building - gallery, garage, garderobe, garret, garrison, grotto

Bump/Bulge - globe

Border - gate

Connection/Road - gate

Sex/Alcohol

Other - galaxy, garden, ghetto, gill, glacier, glade, glen, goal, gorge, grange, grant, green, groove, grounds, gully, guild

Exceptions: 54%

Natural Classification

Cosmic - galaxy, globe

Geographical - gill, glacier, glade, glen, gorge, groove, grotto, ground, gulf, gully

Political - grant

Streets - gate

City Part - garden, ghetto, green, grounds, gutter
Home -
Institutions/Businesses - gallery, garrison, grange, guild
Building Part - gallery, garage, garret, gate
Direction - goal
Furniture - garderobe
Other - grave

Exceptions: 4%

English Location Words Beginning with /n/

Phonosemantic Classification for /b/ Words

Backlogged/Boggy -
Base/Bottom - nadir, nether
Container/Storage/Building -
Bump/Bulge - knob, knoll, nipple, node
Border -
Connection/Road - node
Sex/Alcohol -
Other - narrows, narthex, nave, near, neck, next, niche, nigh, nook, north, notch

Exceptions: 58%

Natural Classification

Cosmic - nadir, node
Geographical - knob, knoll, narrows, neck, niche, nipple, node, notch
Political -
Streets -
City Part -
Home - nest
Institutions/Businesses -
Building Part - narthex, nave
Direction - near, nether, next, nigh, north
Furniture -
Other - nook

Exceptions: 5%

Russian Location Words Beginning with /b/

Phonosemantic Classification for /b/ Words

Backlogged/Boggy - bassejn (pool), boloto (swamp), buxta (bay)
Base/Bottom - baza (base), balka (gully), bassejn (basin)
Container/Storage/Building - baza (base), bank (bank), banya (sauna), barak (barrack), benuar (theater box), berloga (den), besedka (summer house), bivak (bivouac), bir'a (exchange), blok (block), bojnya (slaughter house), boks (isolation cubicle), budka (booth), buduar (boudoir), bunker (bunker), byuro (office), byk (pier)
Bump/Bulge - barxan (sand hill), bawnya (tower), bugor (knoll)
Border - balyustrada (balustrade), banka (shoal), bastion (bastion), bereg (shore), bord'yur (border), borozda (fissure), bort (side), bresh; (gap), brovka (edge), brod (ford), brustver (parapet)
Connection/Road - brod (ford), bul'var (boulevard)
Sex/Alcohol - bar (bar)
Other - baxcha (low-lying field), bor (pine forest), bytie (world, existence)

Exceptions: 8%

Natural Classification

Cosmic - bytie (world, existence)

Geographical - bassejn (pool), balka (gully), banka (shoal), barxan (sand hill), bereg (shore), boloto (swamp), bor (pine forest), borozda (fissure), bort (side), bresh; (gap), brovka (edge), brod (ford), bugor (knoll), buxta (bay)
Political - bord'yur (border)
Streets - bul'var (boulevard)
City Part - blok (block)
Home - barak (barrack), berloga (den), besedka (summer house), bivak (bivouac), bunker (bunker)
Institutions/Businesses - bank (bank), banq (sauna), bar (bar), bir'a (exchange), bojnya (slaughter house), budka (booth), byuro (office)
Building Part - balyustrada (balustrade), bastion (bastion), bashnya (tower), benuar (theater box), boks (isolation cubicle), brustver (parapet)
Direction -
Furniture - buduar (boudoir)
Other - baxcha (low-lying field), byk (pier)

Exceptions: 5%

Russian Location Words Beginning with /t/

Phonosemantic Classification for /b/ Words

Backlogged/Boggy - tryasina (quagmire), tupik (blind alley)

Base/Bottom -

Container/Storage/Building - taverna (tavern), tambur (lobby), teatr (theater), terem (tower room), tualet (bathroom), tyur'ma (prison)

Bump/Bulge -

Border - tyn (stockade)

Connection/Road - trakt (highway)

Sex/Alcohol - taverna (tavern)

Other - tabor (camp), ten; (shade), terrasa (terrace), truyeba (slum), tuda (there), tundra (tundra), tut (here), tyl (rear), t'ma (dark)

Exceptions: 47%

Natural Classification

Cosmic -

Geographical - tundra (tundra)

Political -

Streets - trakt (highway), tupik (blind alley)

City Part -

Home - tabor (camp)

Institutions/Businesses - taverna (tavern), teatr (theater), tyur'ma (prison)

Building Part - tambur (lobby), terem (tower room), terrasa (terrace)

Direction - tuda (there), tut (here), tyl (rear)

Furniture -

Other - ten; (shade), t'ma (dark)

Exceptions: 11%