

Manuscript: DE070483 Revised

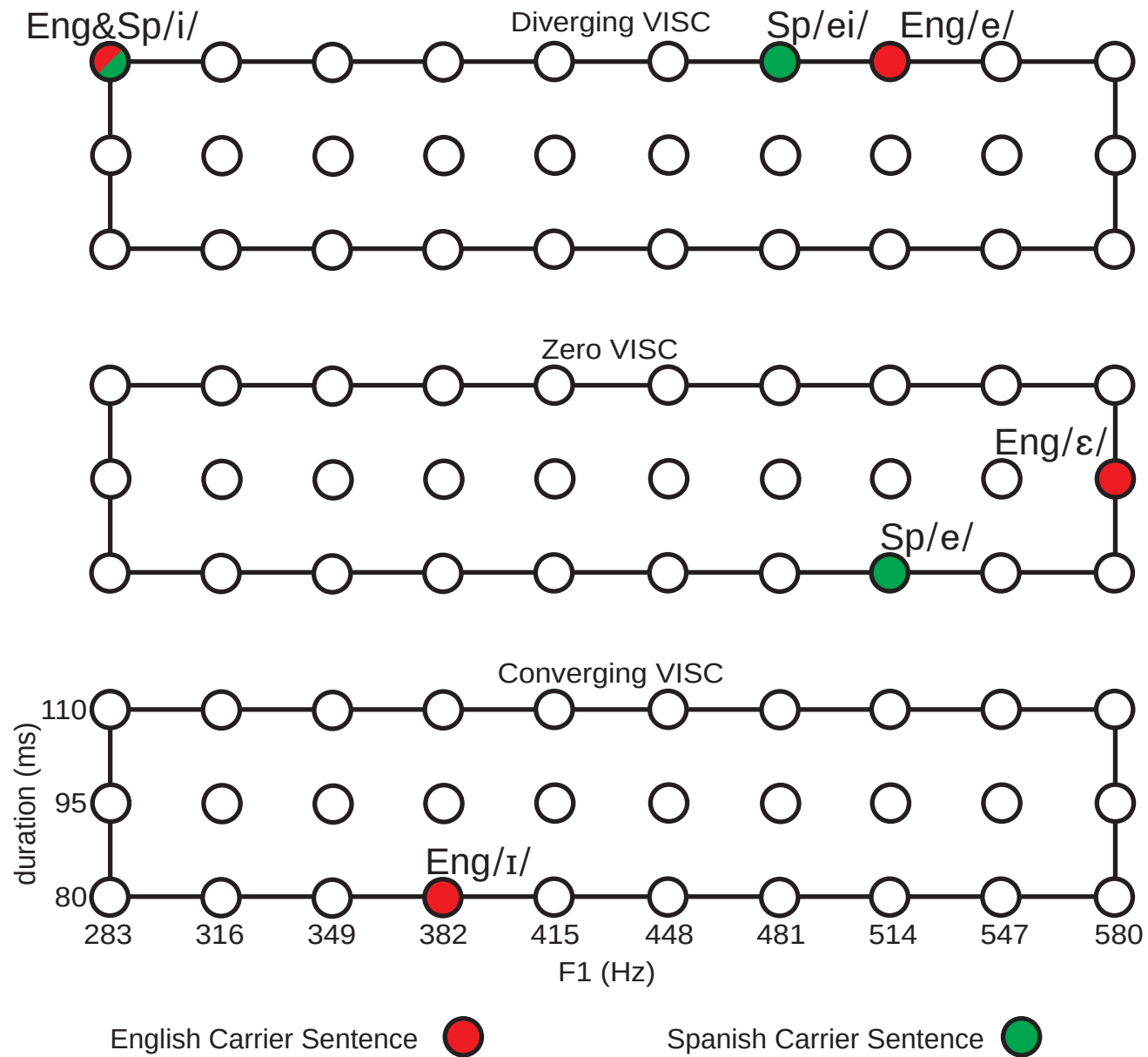
Date: 28 January 2008

L1-Spanish speakers' acquisition of the English /i/–/ɪ/ contrast II:
Perception of vowel inherent spectral change

Geoffrey Stewart Morrison
Australian National University

Supplementary Figures

Properties of the synthetic stimuli.
Click on dots to play associated stimuli.

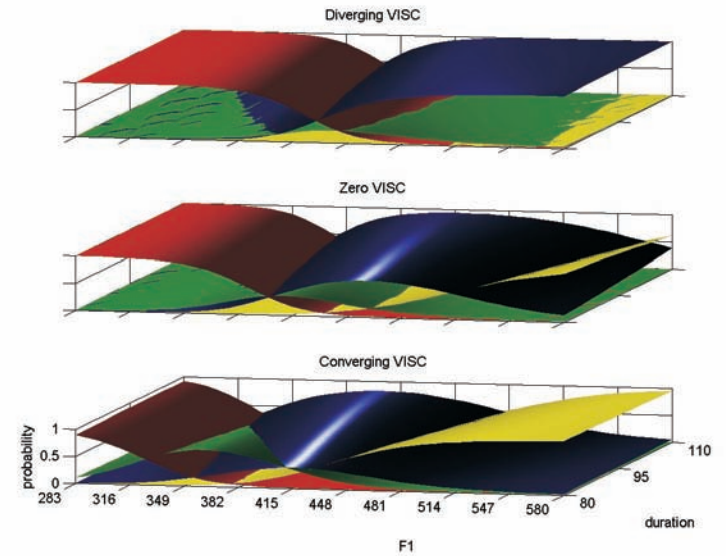
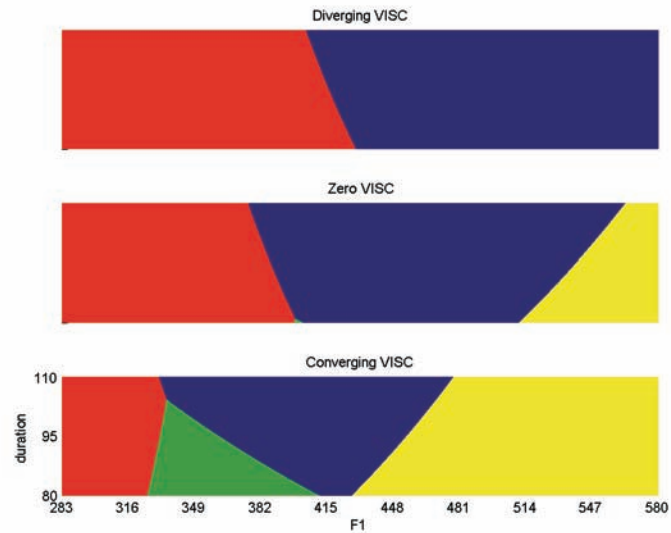


Monolingual-Western-Canadian-English listeners

listener: me096

$G^2(255)$: 103

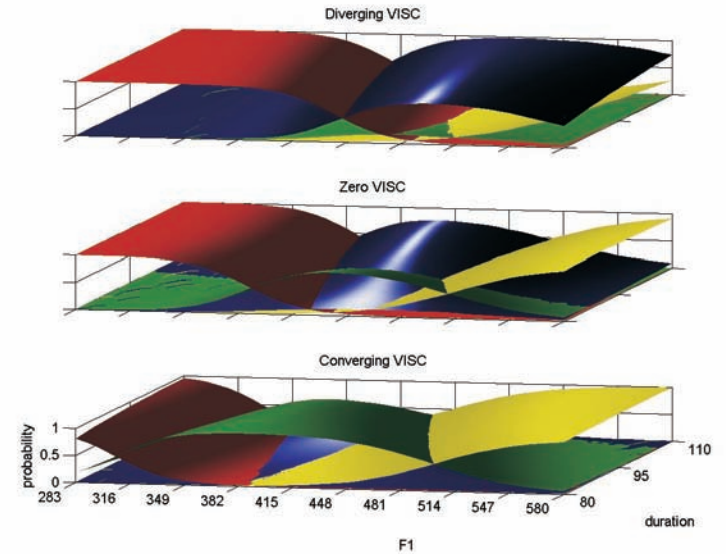
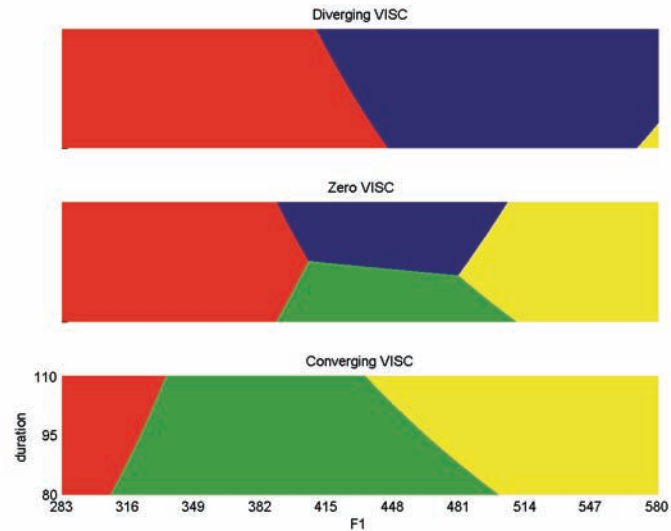
SAEP: 11%



listener: me097

$G^2(255)$: 113

SAEP: 13%



English

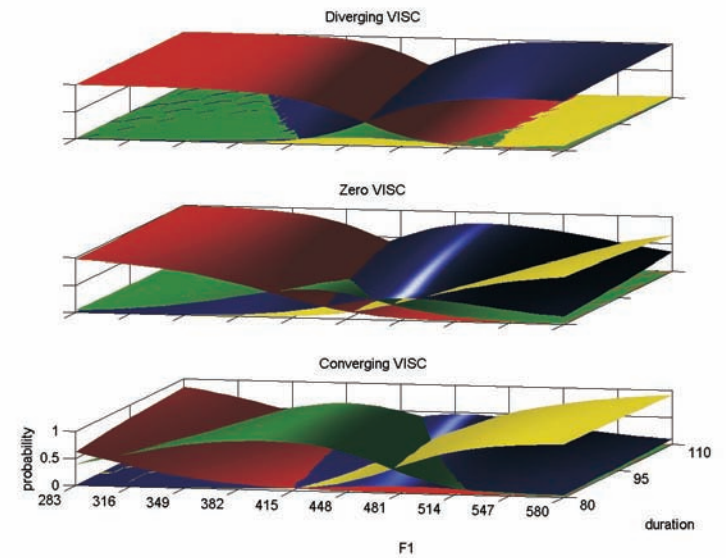
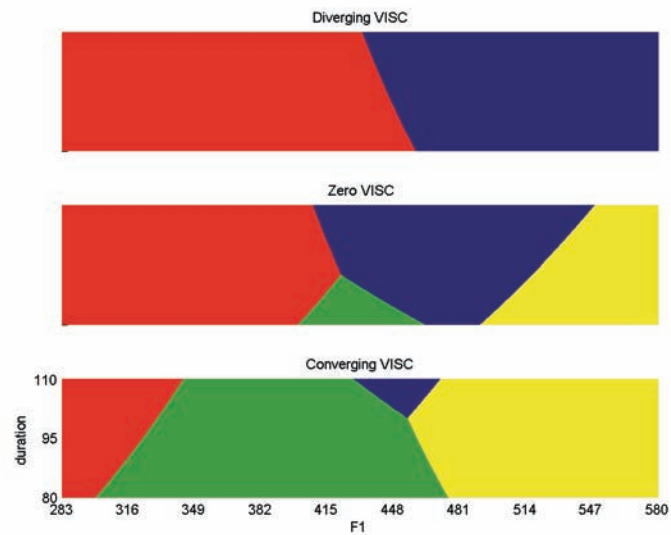


Monolingual-Western-Canadian-English listeners

listener: me098

$G^2(255)$: 181

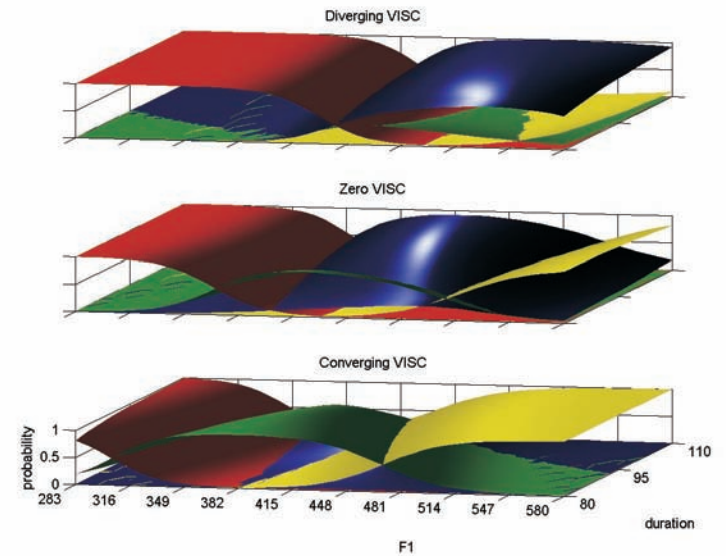
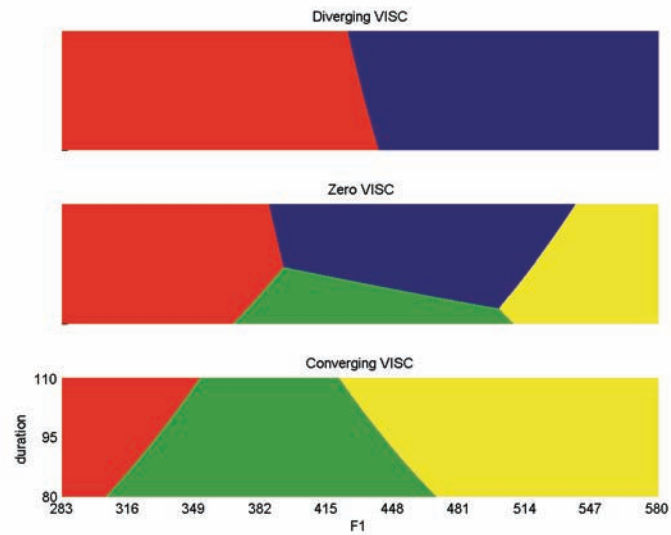
SAEP: 15%



listener: me099

$G^2(255)$: 139

SAEP: 11%



English

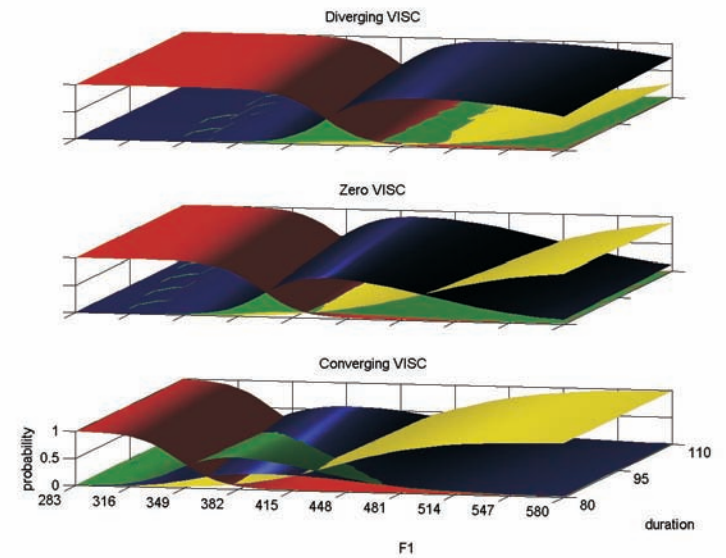
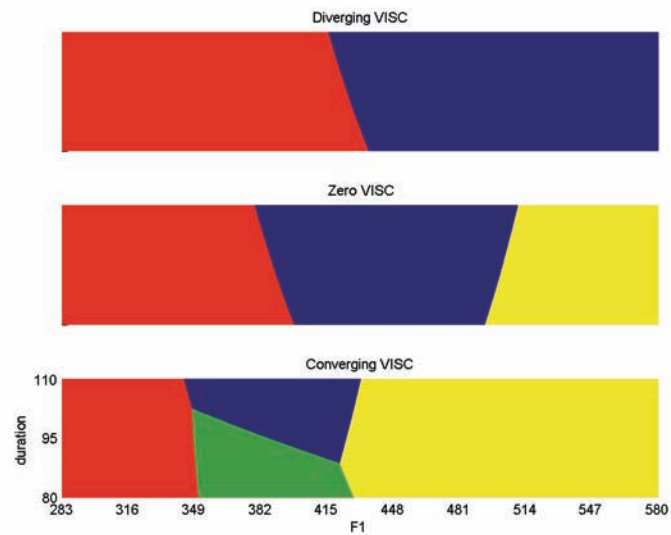


Monolingual-Western-Canadian-English listeners

listener: me100

$G^2(255)$: 111

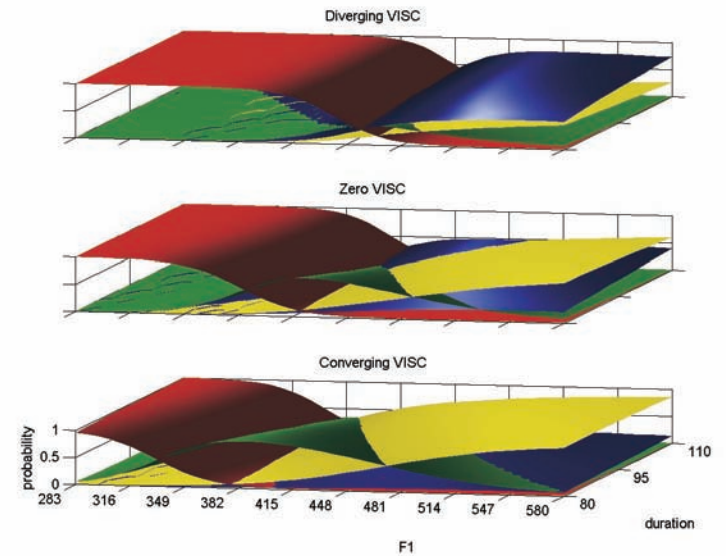
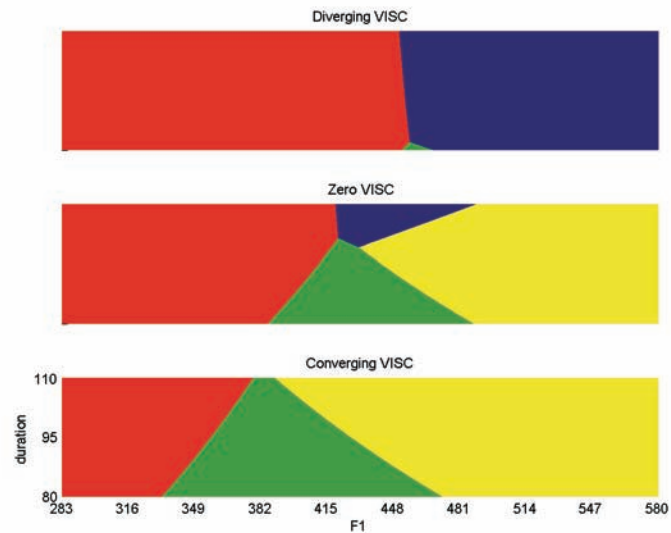
SAEP: 11%



listener: me101

$G^2(255)$: 137

SAEP: 15%



English

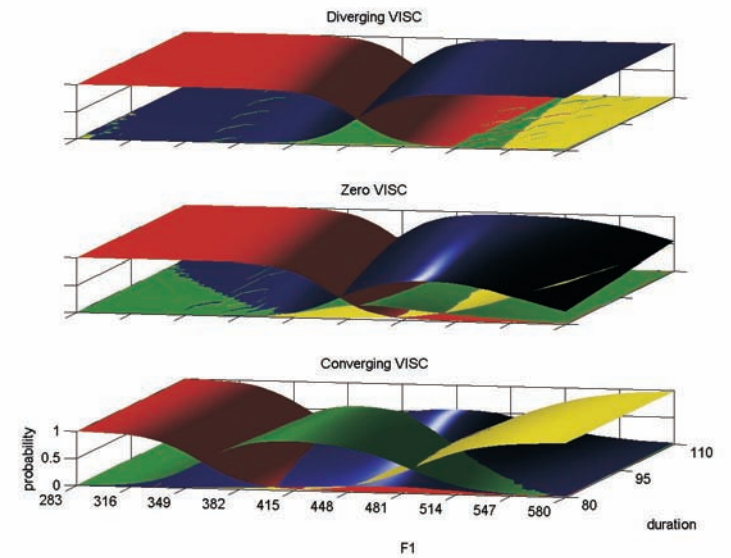
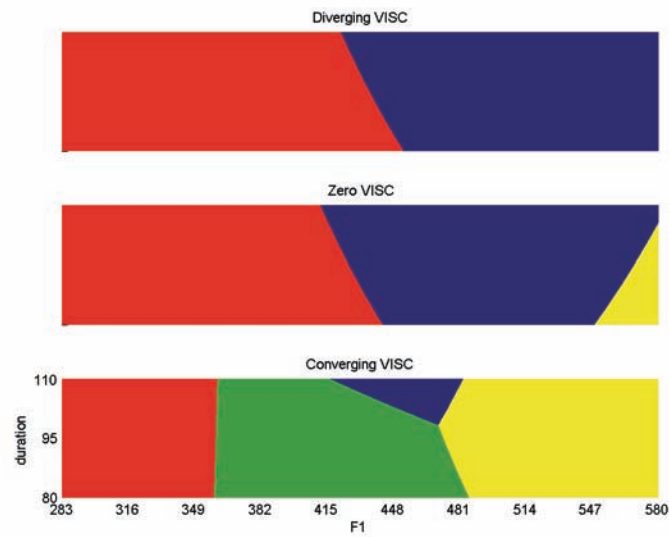


Monolingual-Western-Canadian-English listeners

listener: me103

$G^2(255)$: 75

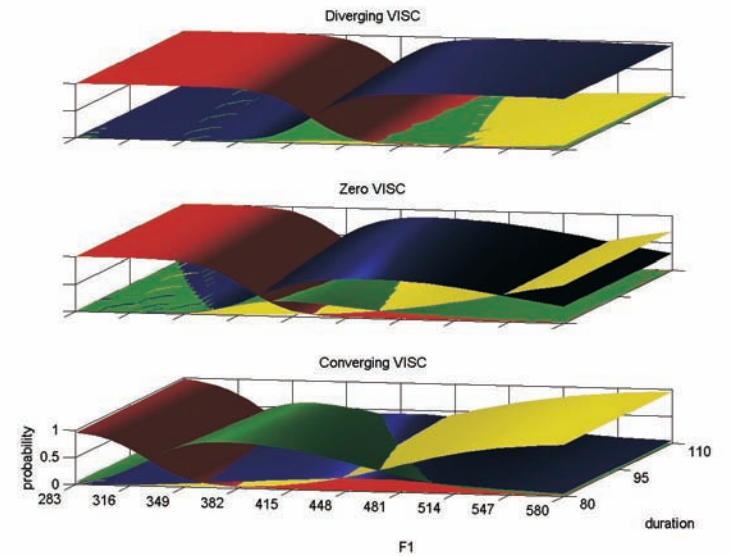
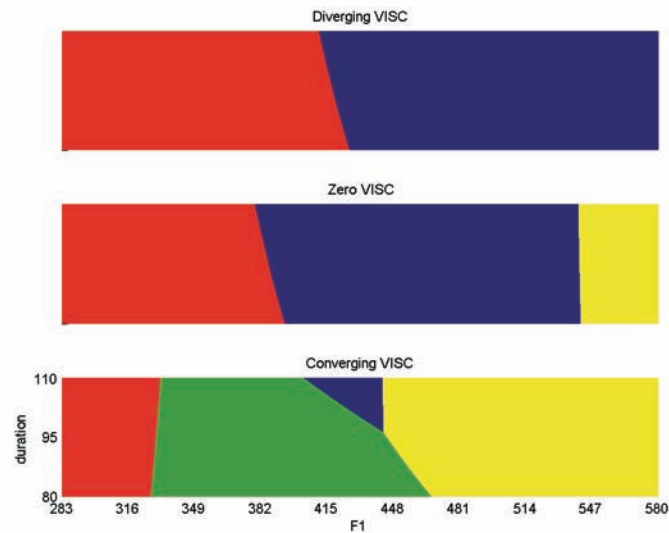
SAEP: 7%



listener: me104

$G^2(255)$: 112

SAEP: 11%



English

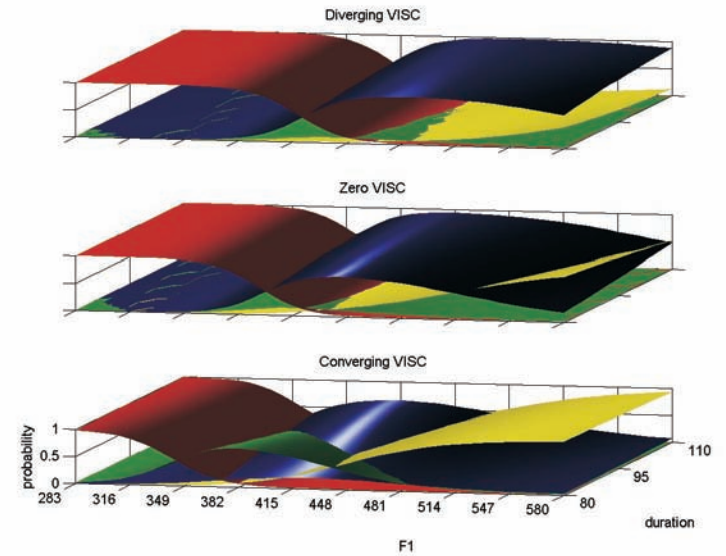
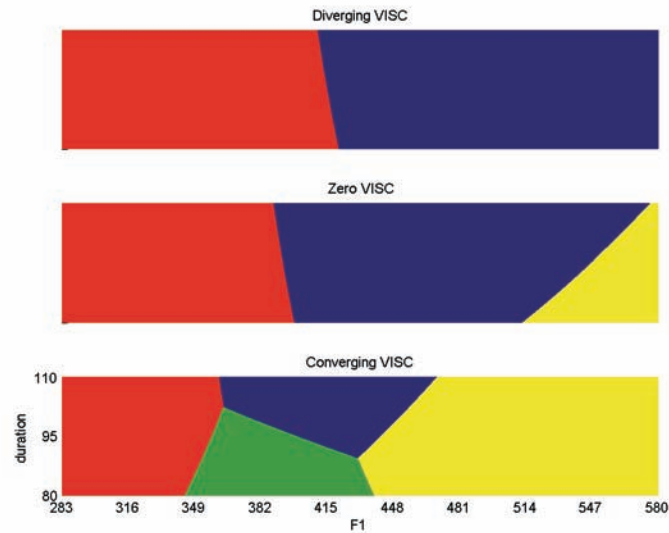


Monolingual-Western-Canadian-English listeners

listener: me105

$G^2(255)$: 111

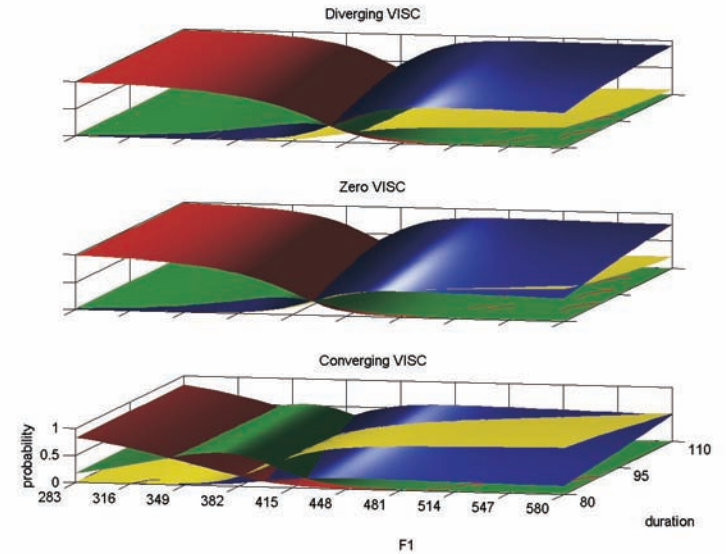
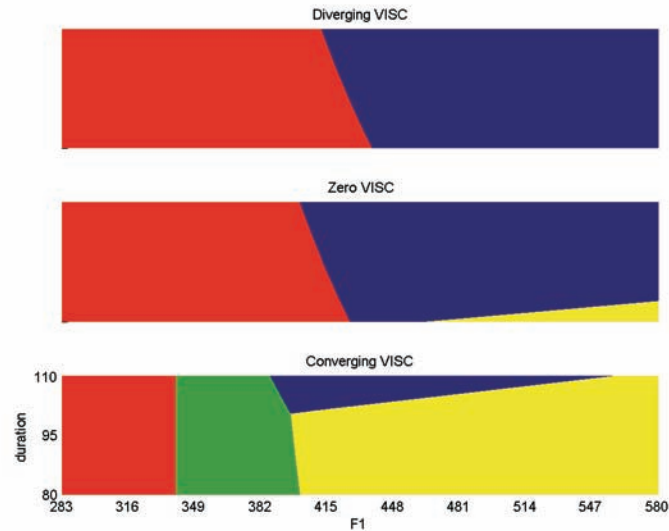
SAEP: 11%



listener: me106

$G^2(255)$: 129

SAEP: 15%



English

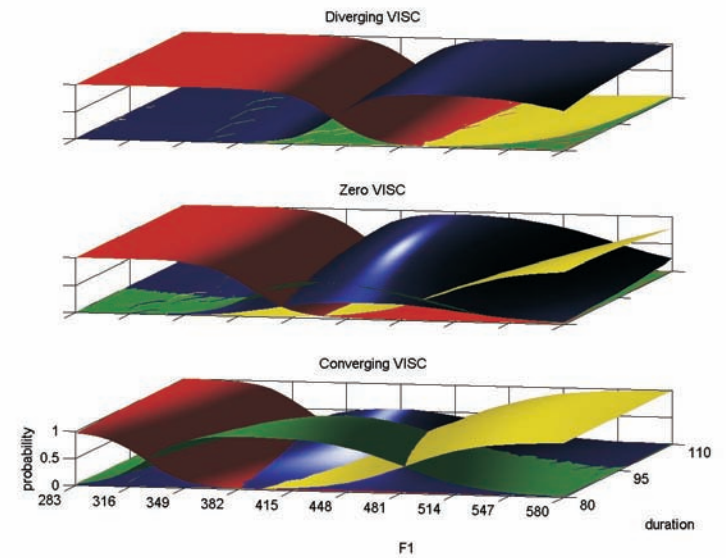
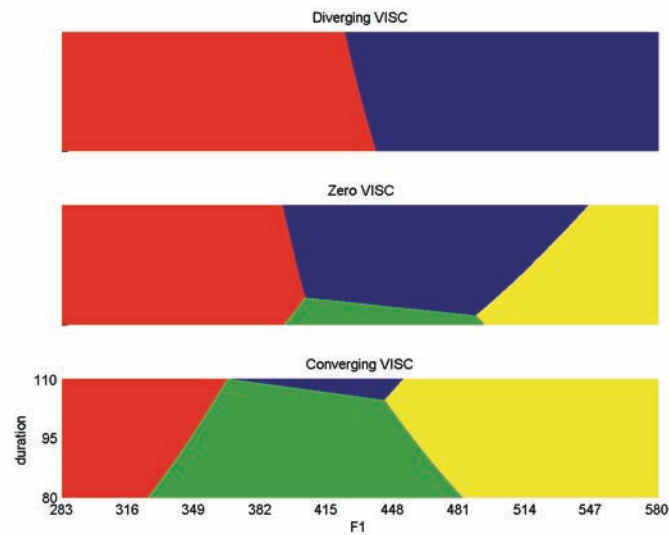


Monolingual-Western-Canadian-English listeners

listener: me107

$G^2(255)$: 107

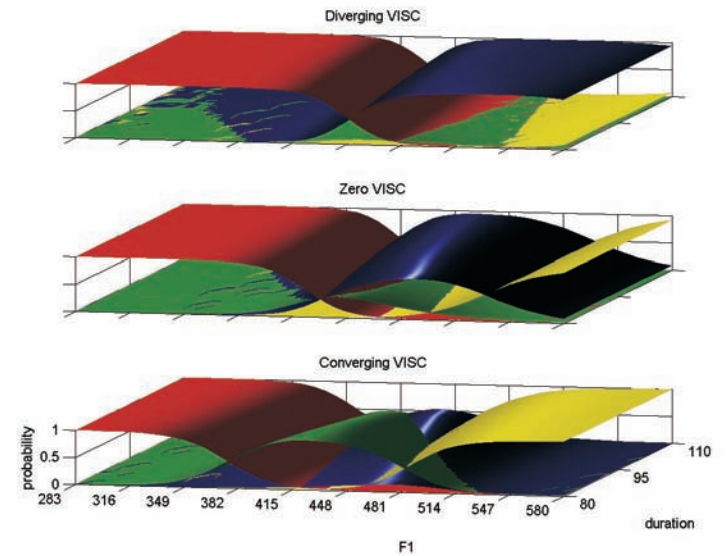
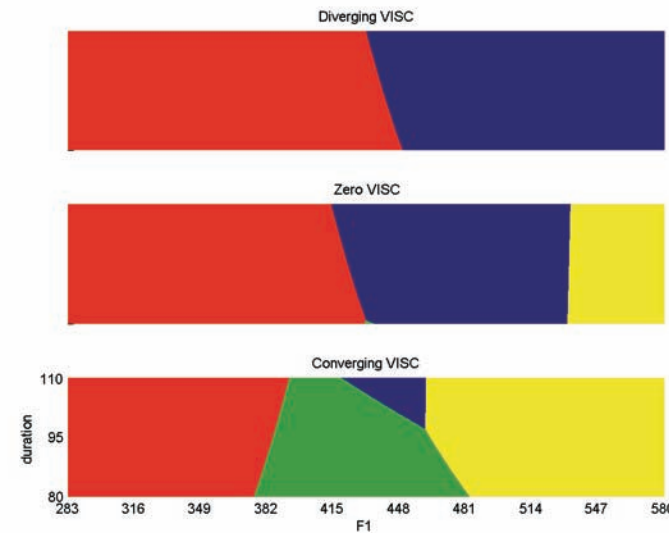
SAEP: 10%



listener: me108

$G^2(255)$: 77

SAEP: 7%



English

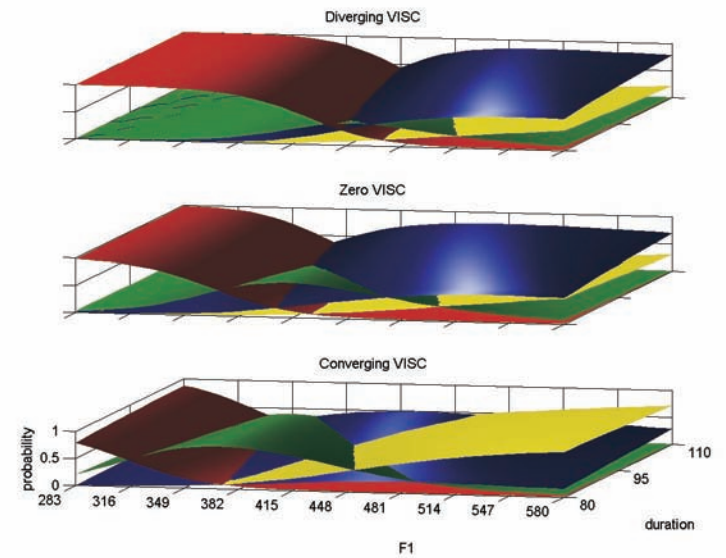
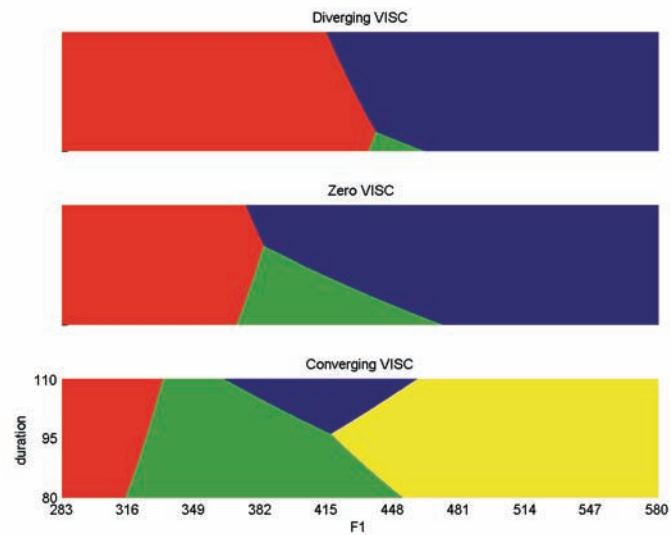


Monolingual-Western-Canadian-English listeners

listener: me109

$G^2(255)$: 156

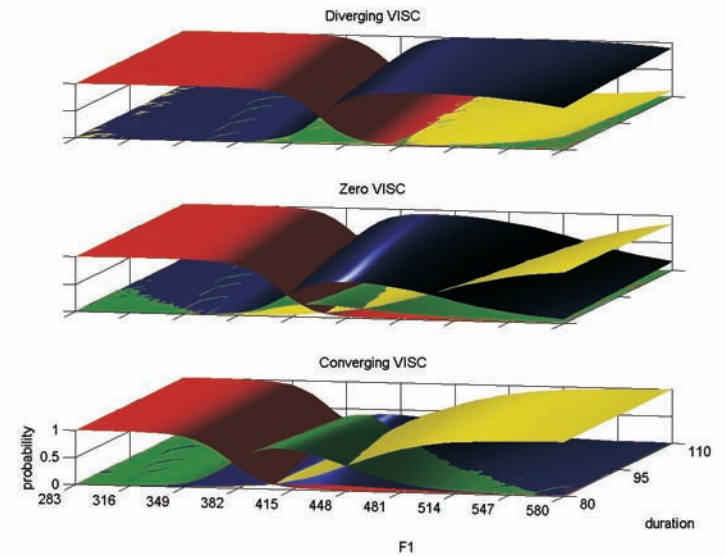
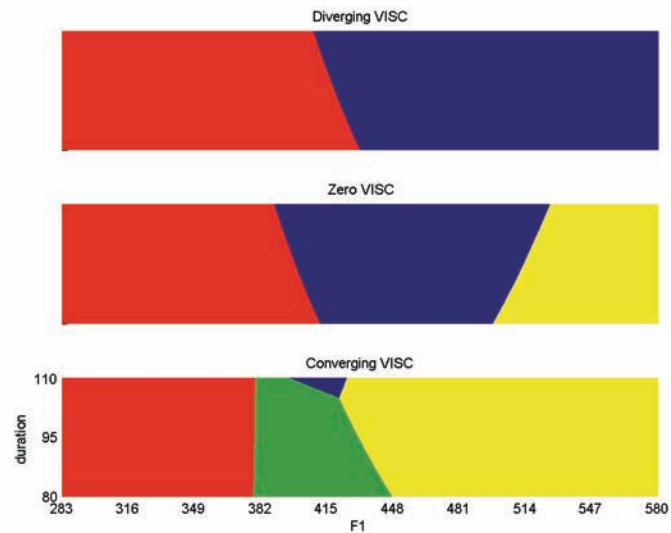
SAEP: 17%



listener: me111

$G^2(255)$: 105

SAEP: 9%



English

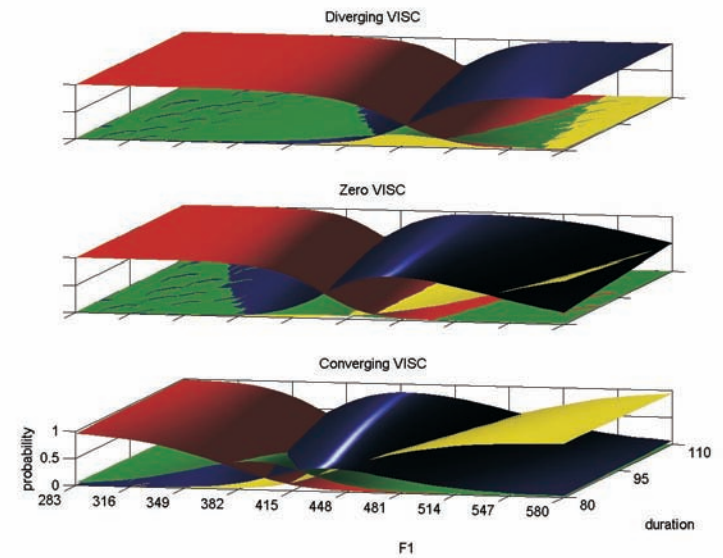
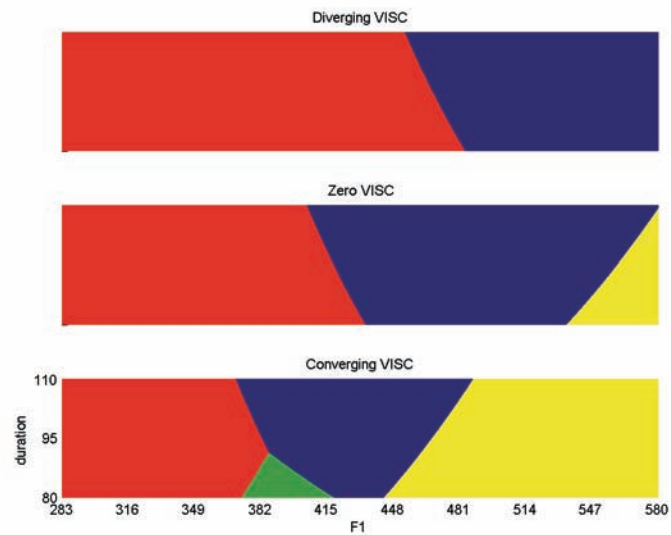


Monolingual-Western-Canadian-English listeners

listener: me112

$G^2(255)$: 112

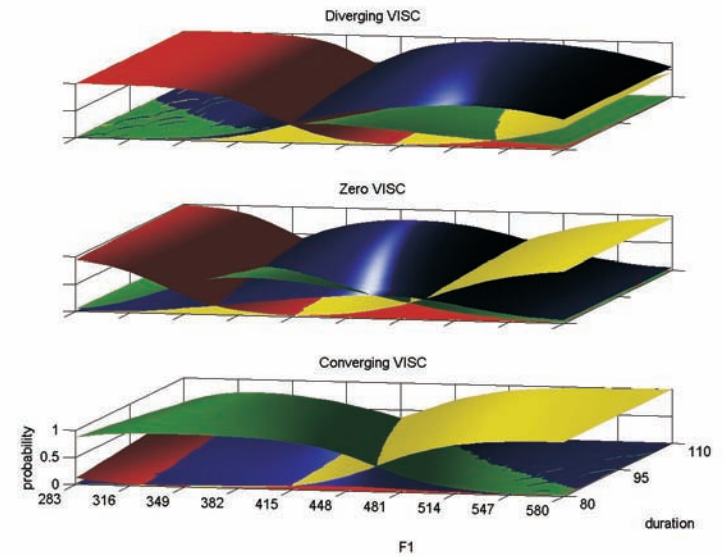
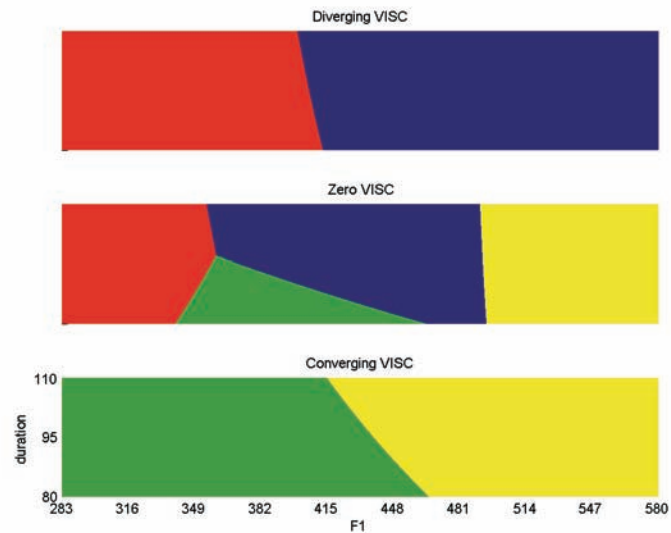
SAEP: 11%



listener: me113

$G^2(255)$: 113

SAEP: 13%



English

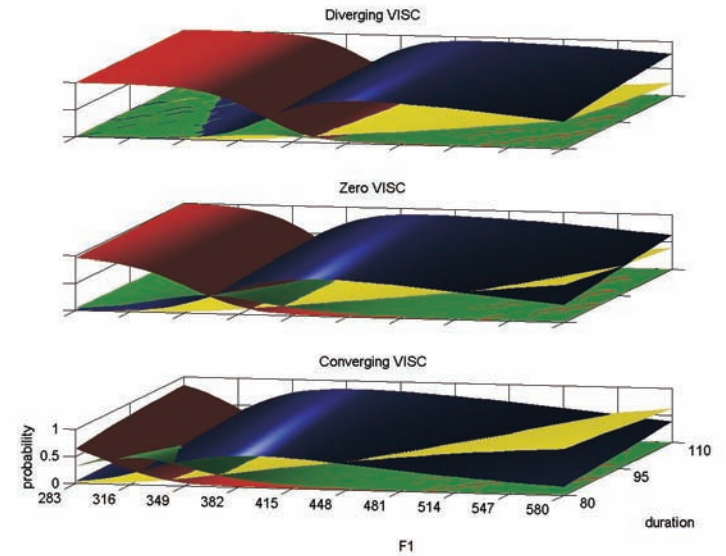
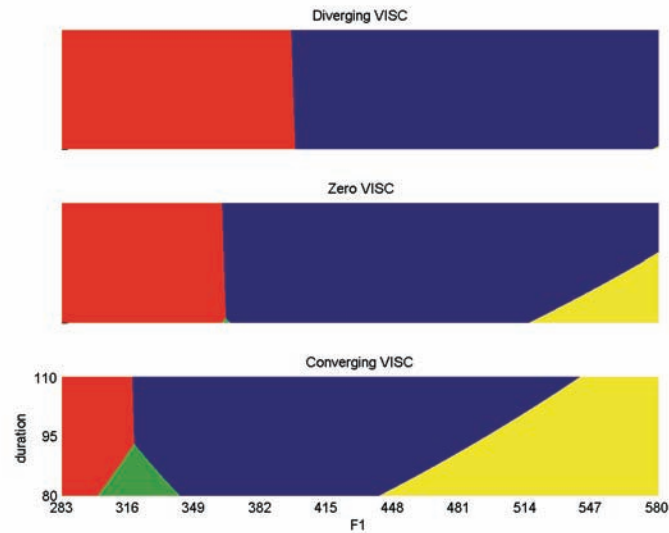


Monolingual-Western-Canadian-English listeners

listener: me115

$G^2(255)$: 108

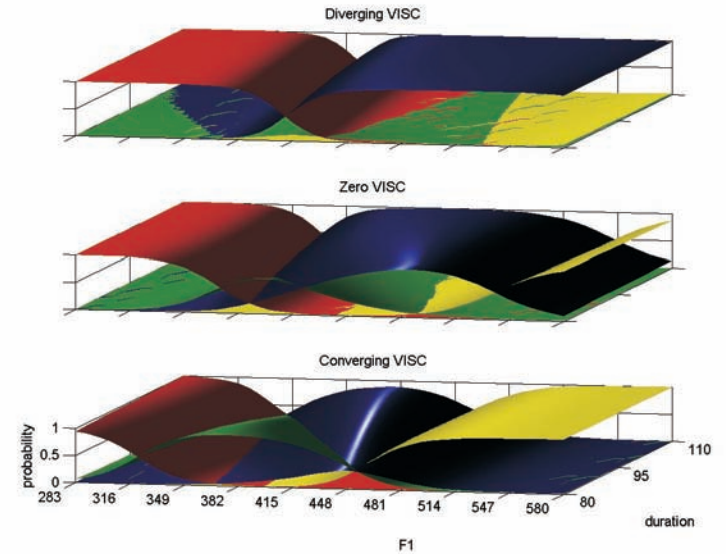
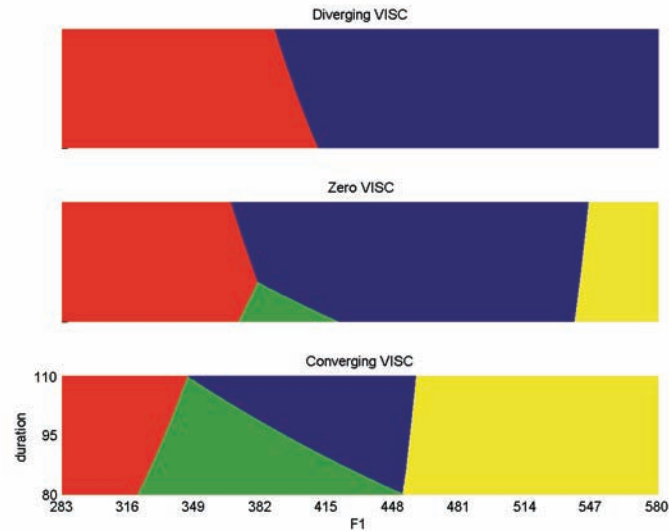
SAEP: 13%



listener: me117

$G^2(255)$: 78

SAEP: 7%



English

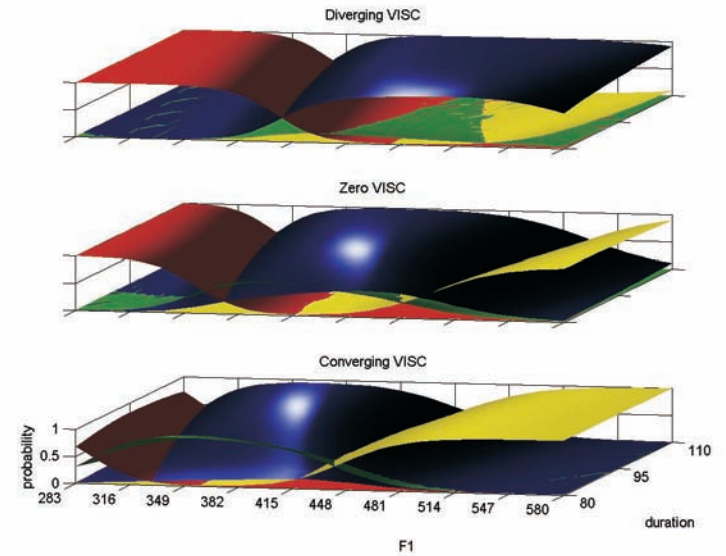
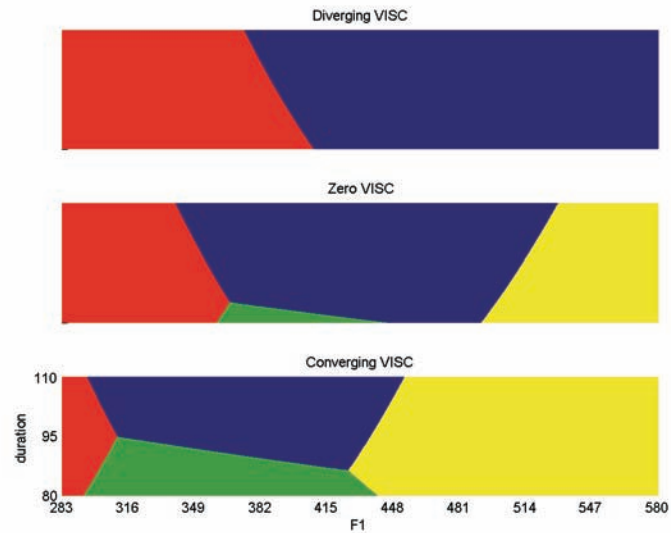


Monolingual-Western-Canadian-English listeners

listener: me118

$G^2(255)$: 99

SAEP: 10%



English

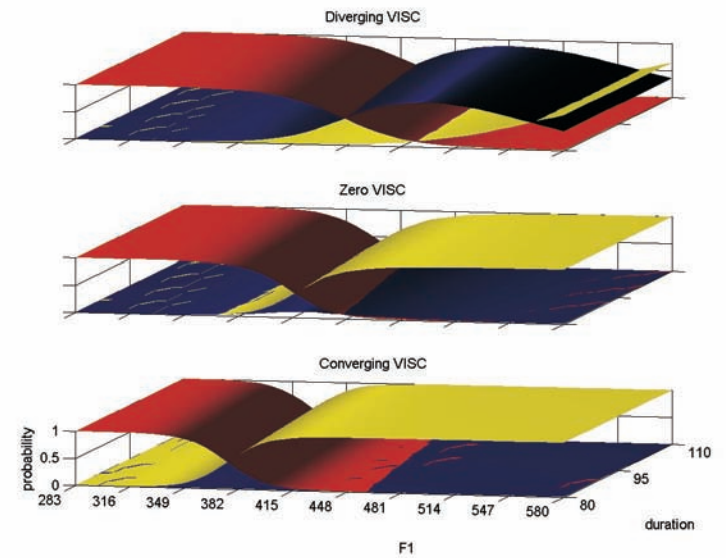
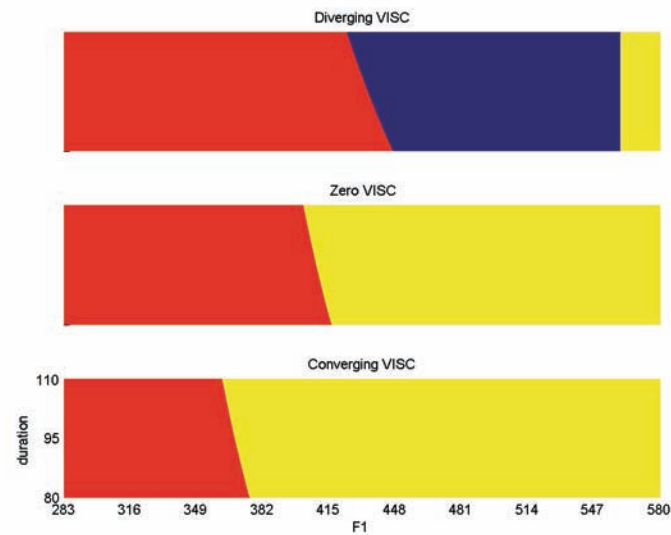


Monolingual-Mexican-Spanish listeners

listener: ms131

$G^2(170)$: 80

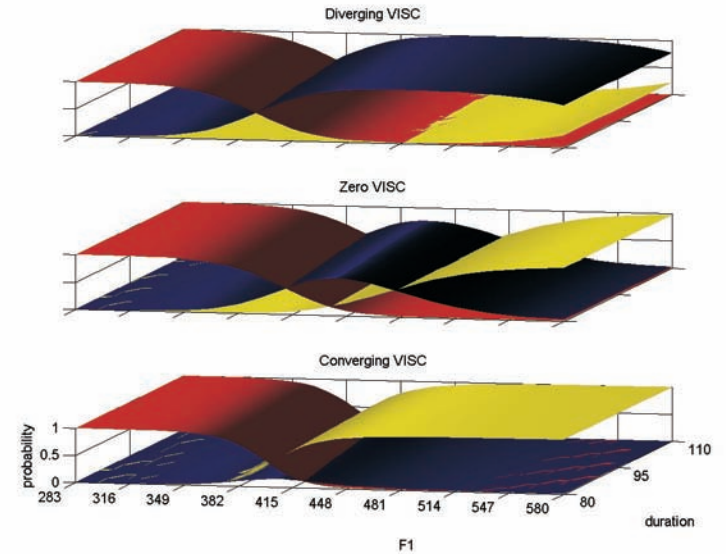
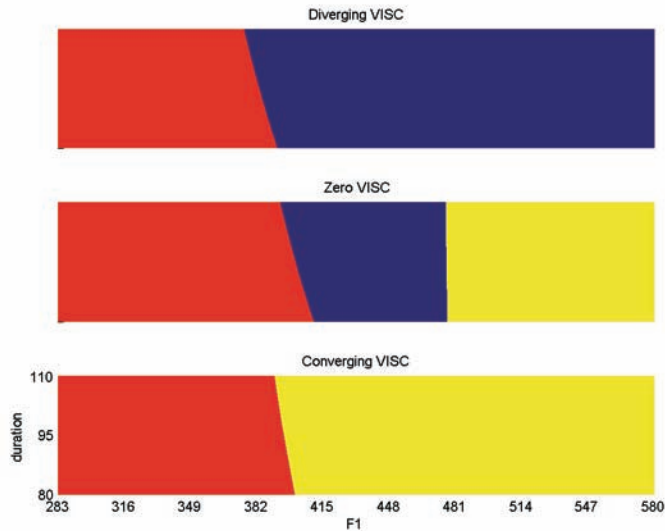
SAEP: 7%



listener: ms132

$G^2(170)$: 53

SAEP: 7%



Spanish

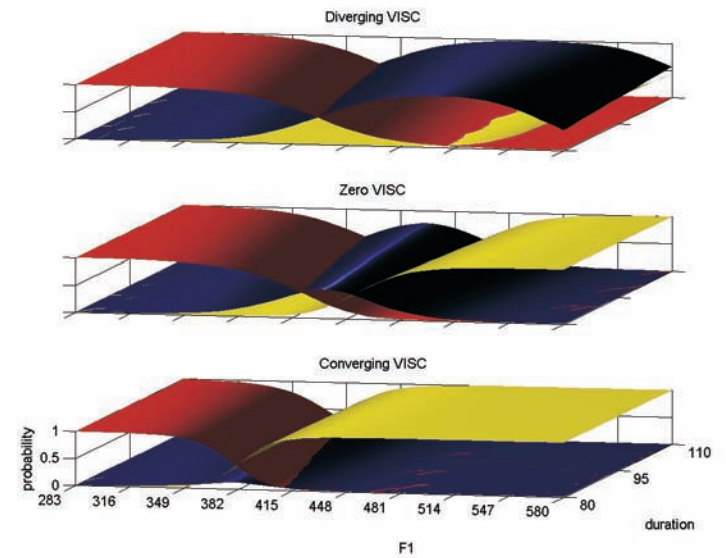
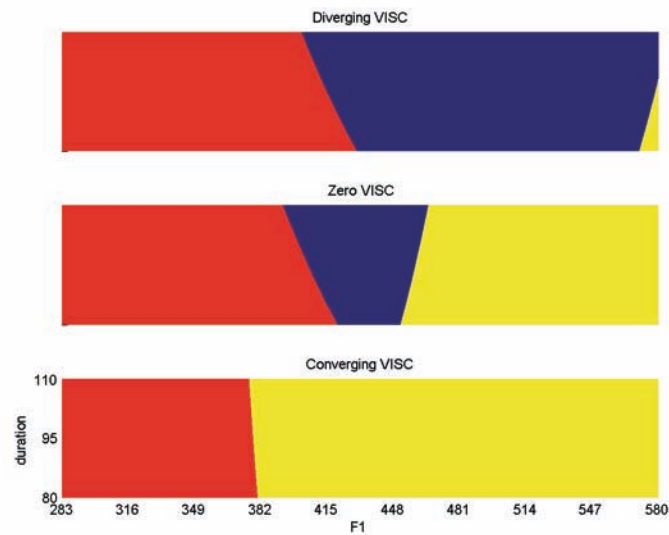


Monolingual-Mexican-Spanish listeners

listener: ms133

$G^2(170)$: 53

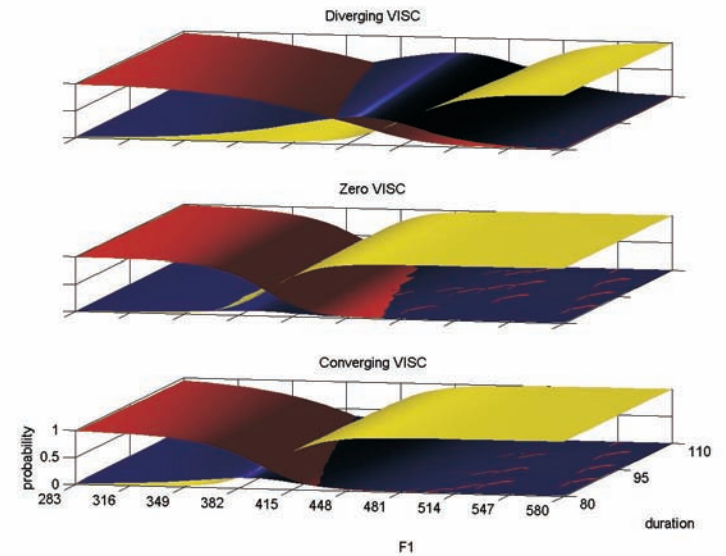
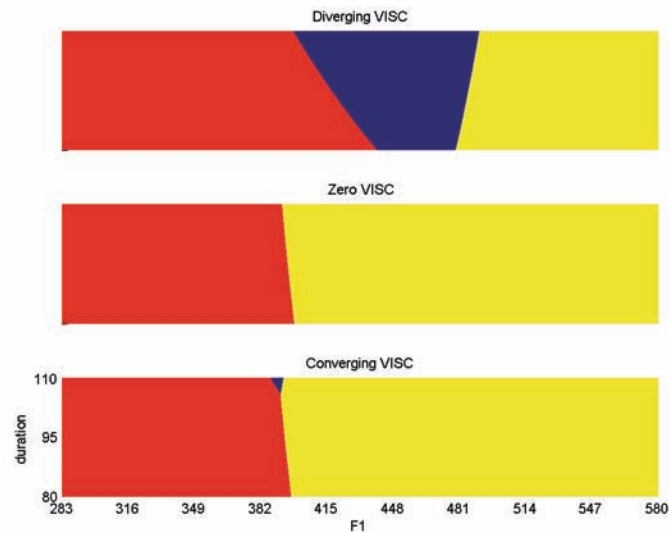
SAEP: 6%



listener: ms134

$G^2(170)$: 107

SAEP: 10%



Spanish

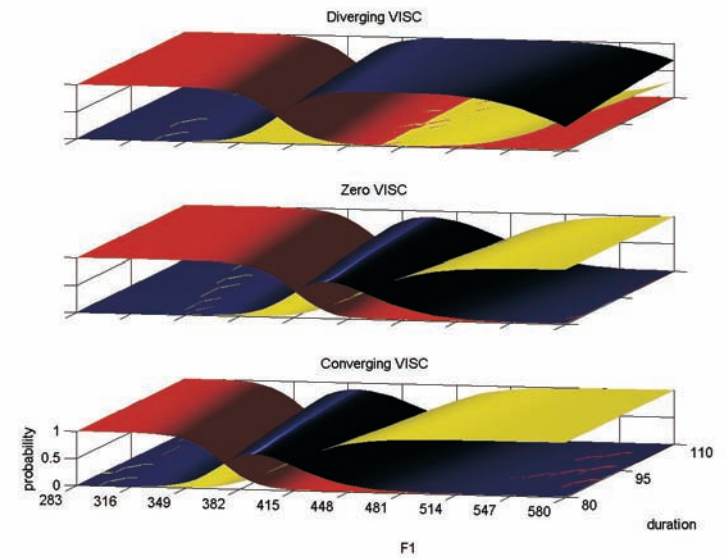
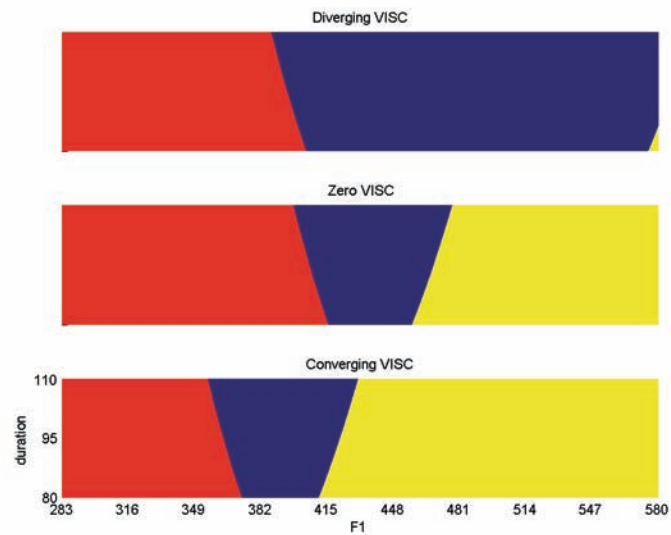


Monolingual-Mexican-Spanish listeners

listener: ms135

$G^2(170)$: 58

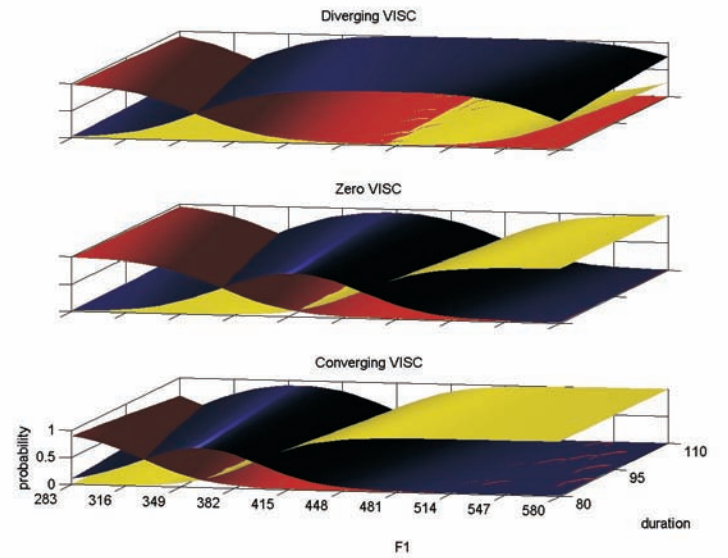
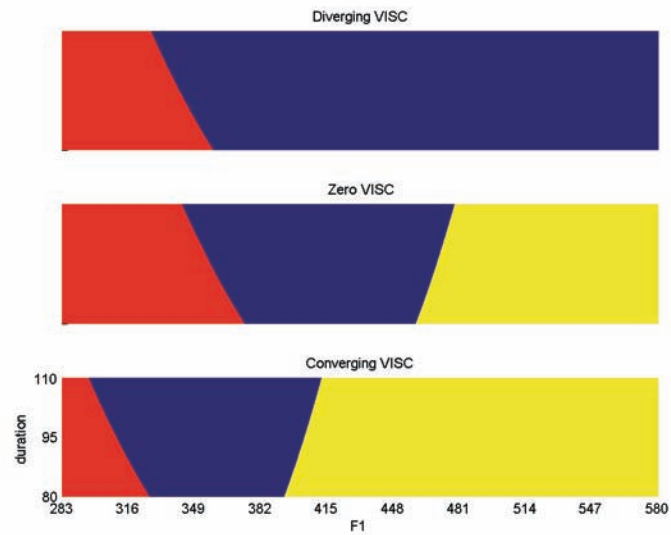
SAEP: 6%



listener: ms136

$G^2(170)$: 69

SAEP: 10%



Spanish

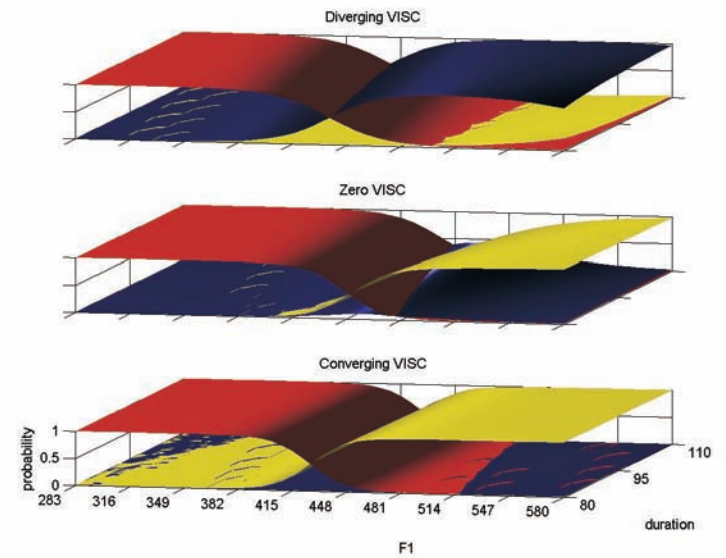
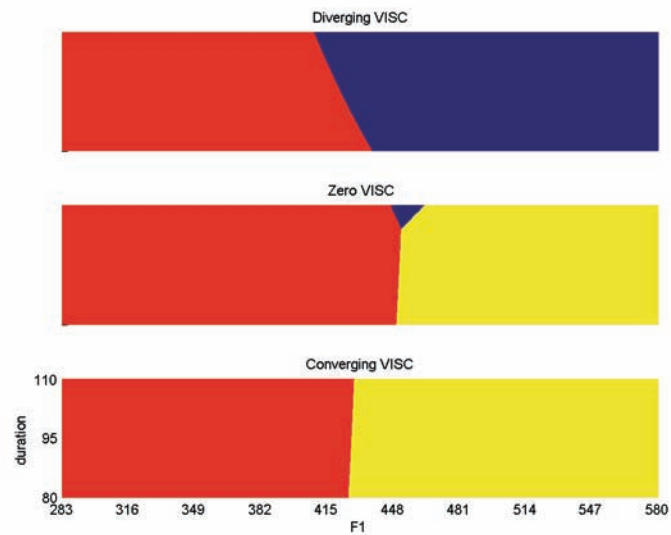


Monolingual-Mexican-Spanish listeners

listener: ms137

$G^2(170)$: 54

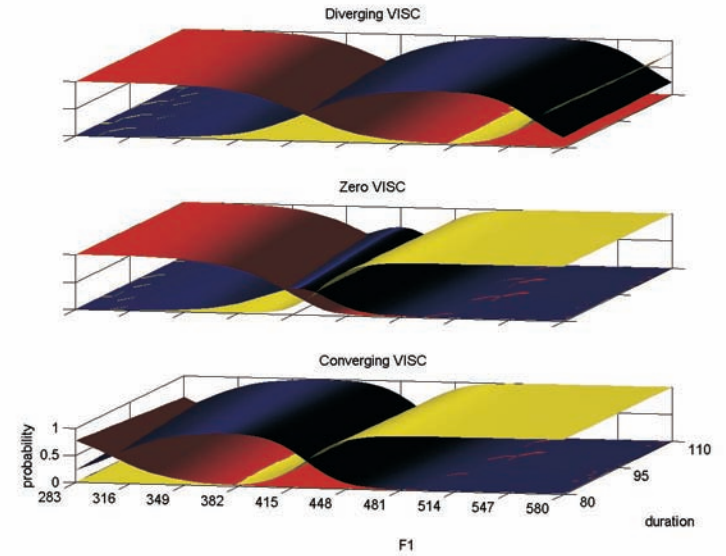
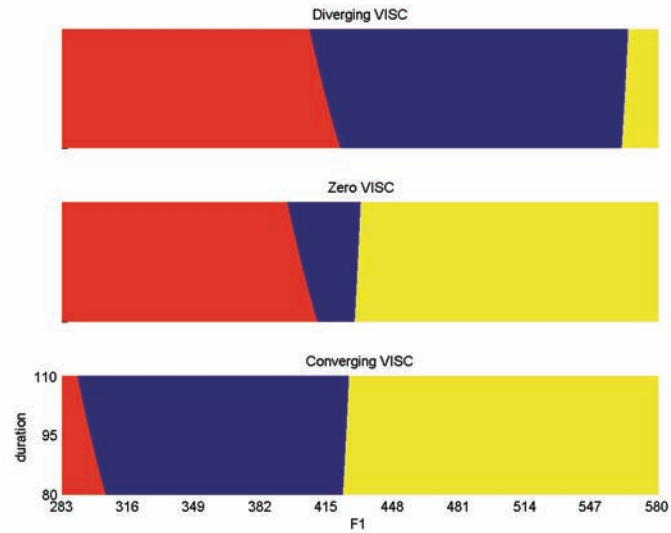
SAEP: 5%



listener: ms138

$G^2(170)$: 78

SAEP: 9%



Spanish

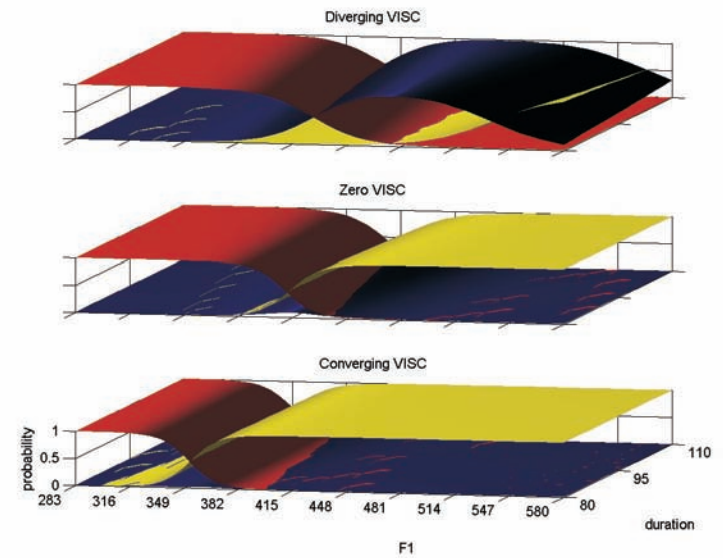
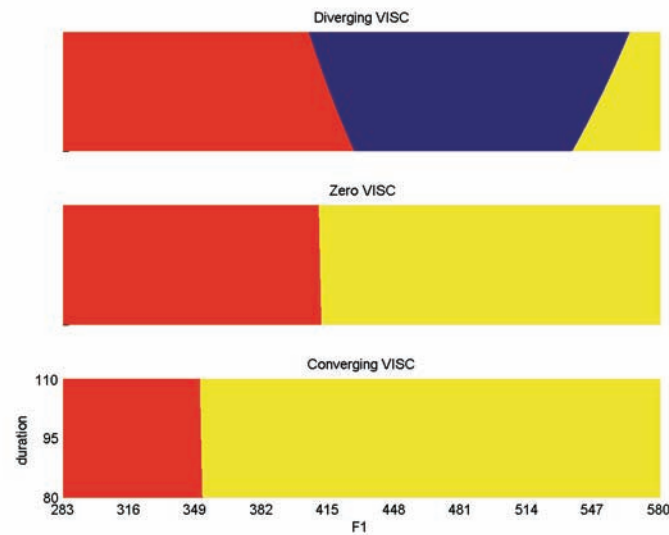


Monolingual-Mexican-Spanish listeners

listener: ms139

$G^2(170)$: 48

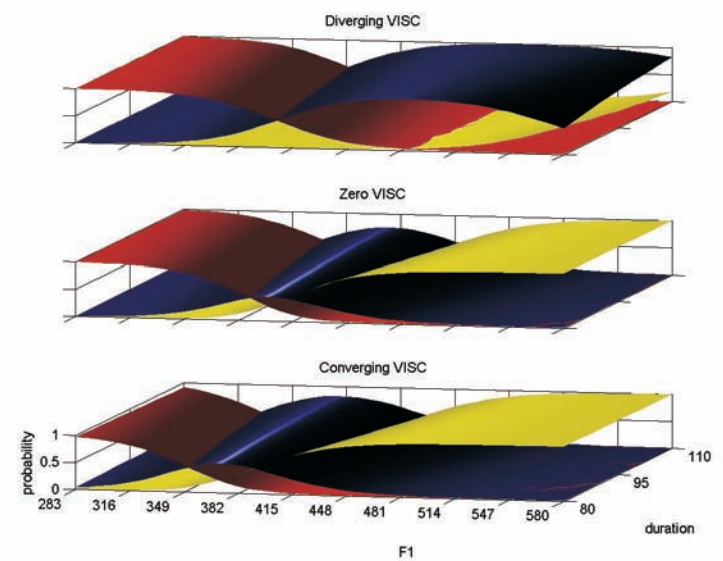
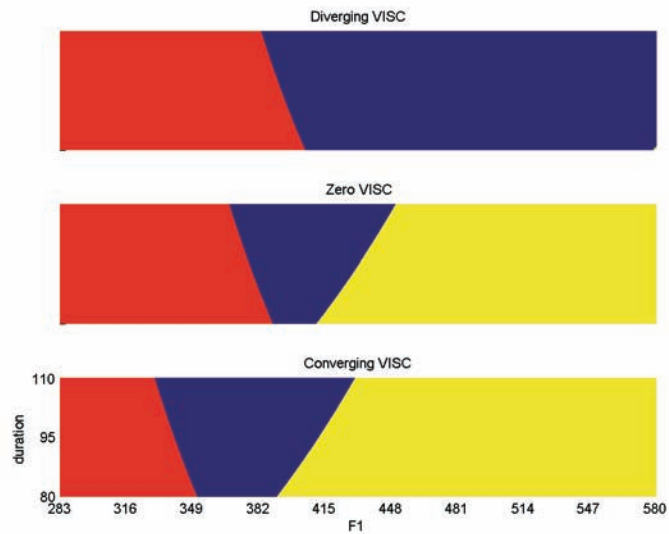
SAEP: 5%



listener: ms140

$G^2(170)$: 98

SAEP: 12%



Spanish

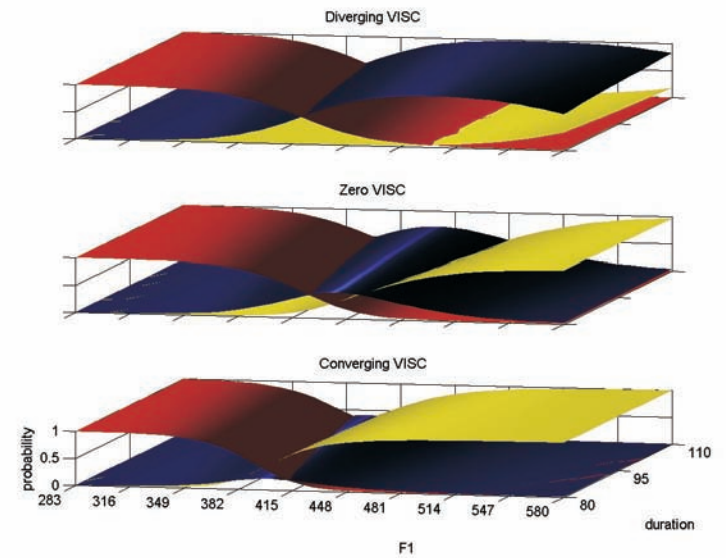
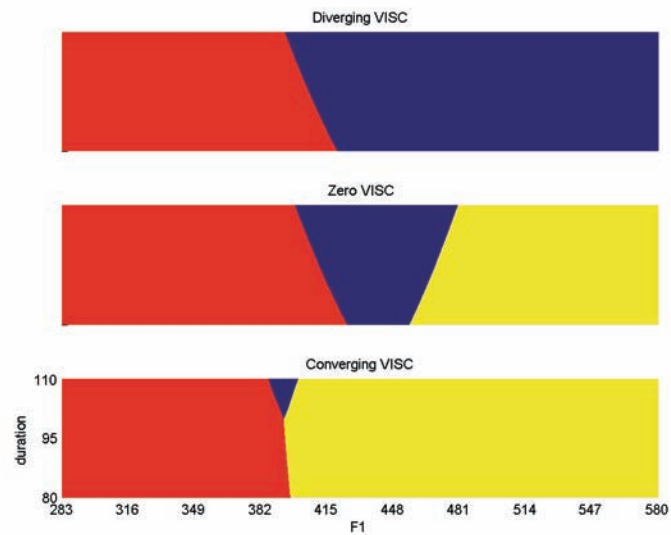


Monolingual-Mexican-Spanish listeners

listener: ms141

$G^2(170)$: 87

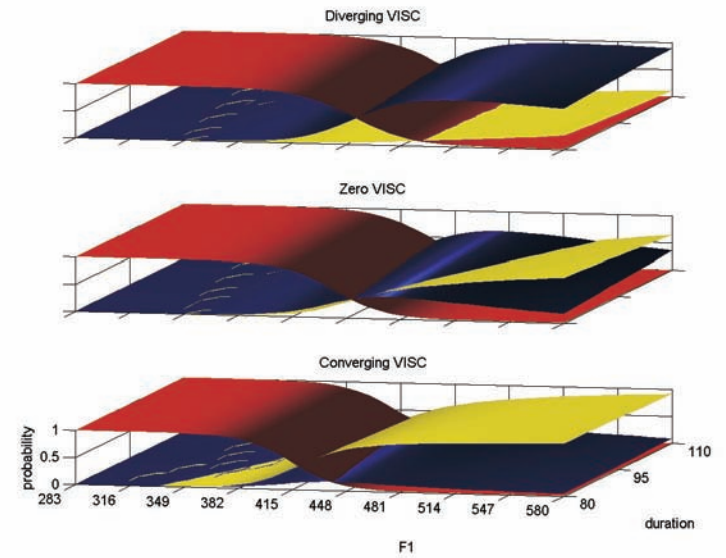
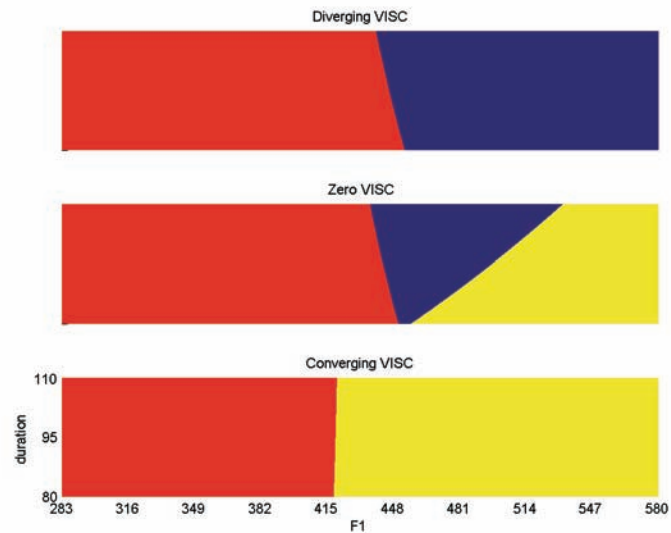
SAEP: 9%



listener: ms142

$G^2(170)$: 63

SAEP: 8%



Spanish

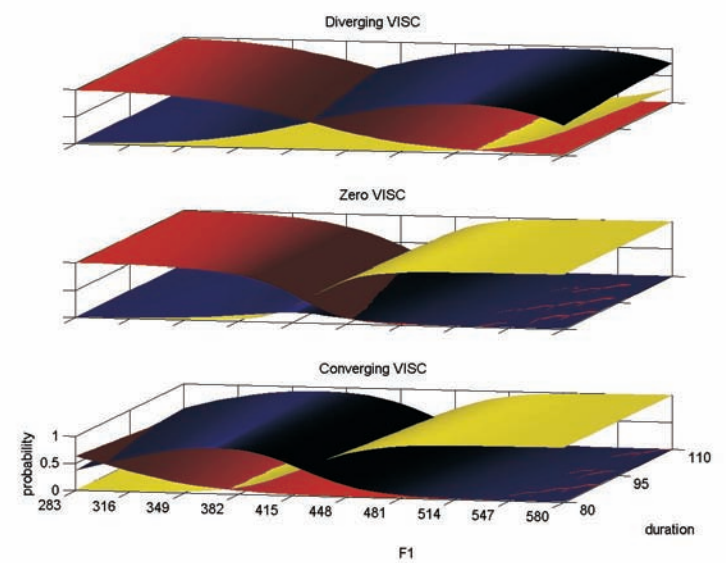
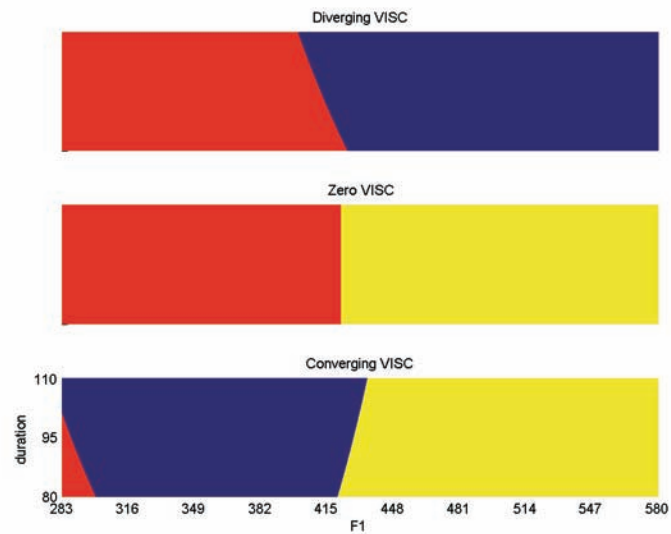


Monolingual-Mexican-Spanish listeners

listener: ms143

$G^2(170)$: 98

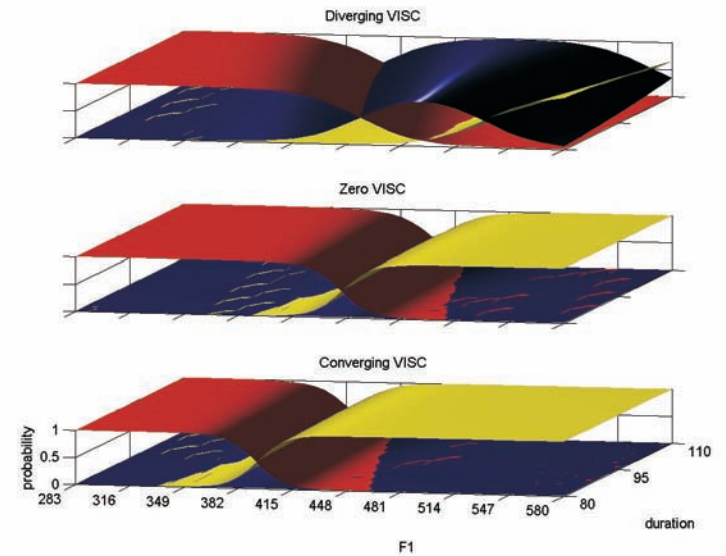
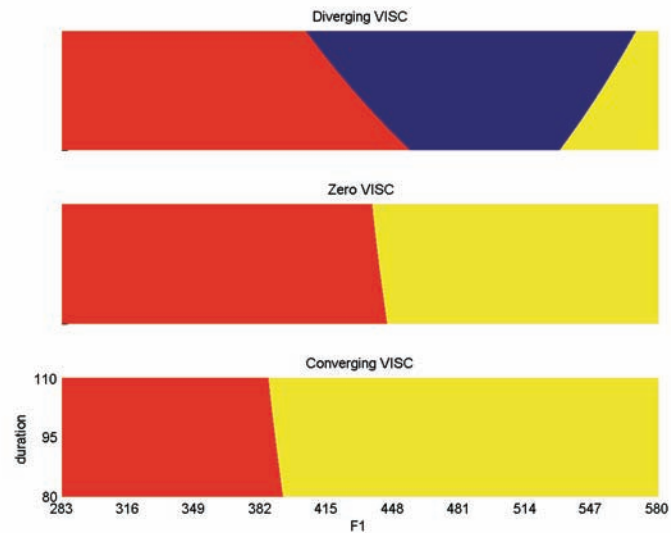
SAEP: 11%



listener: ms144

$G^2(170)$: 65

SAEP: 5%



Spanish

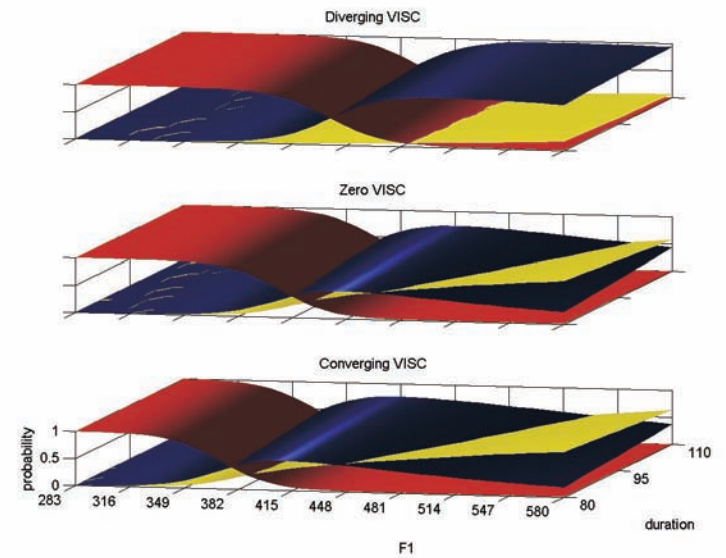
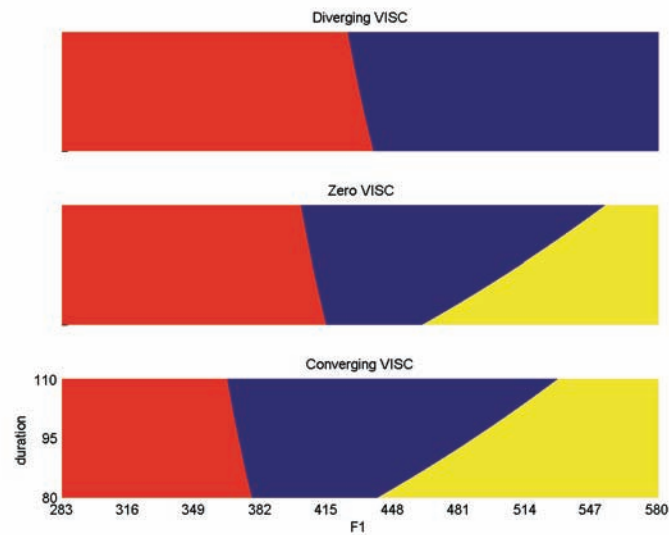


Monolingual-Mexican-Spanish listeners

listener: ms145

$G^2(170)$: 81

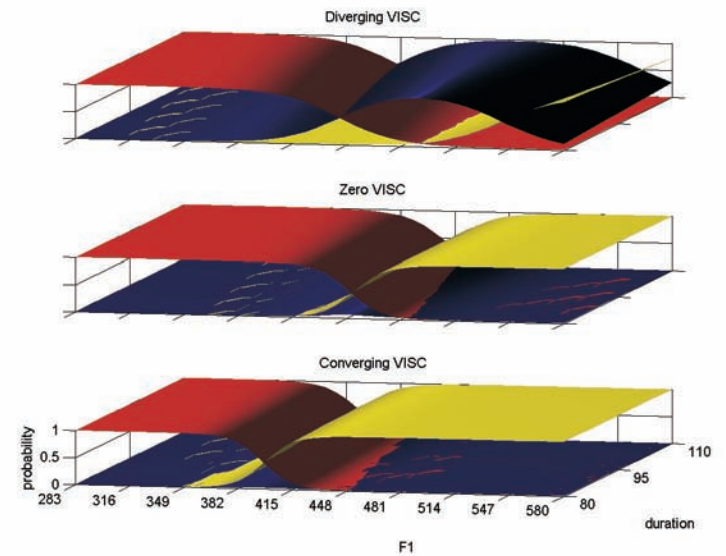
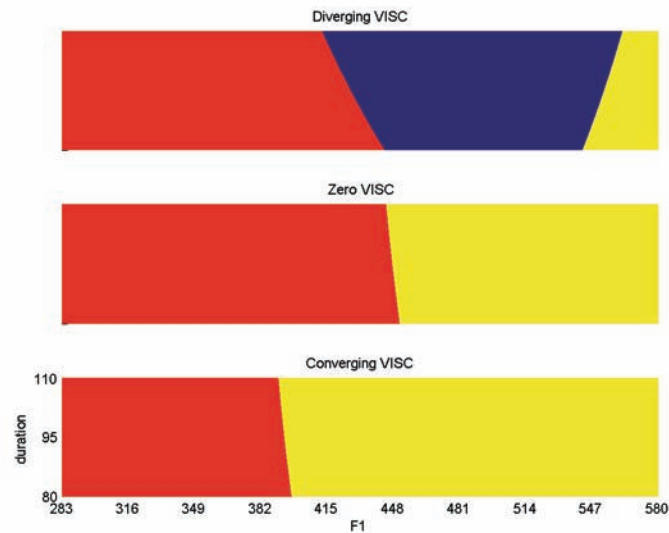
SAEP: 11%



listener: ms146

$G^2(170)$: 53

SAEP: 5%



Spanish

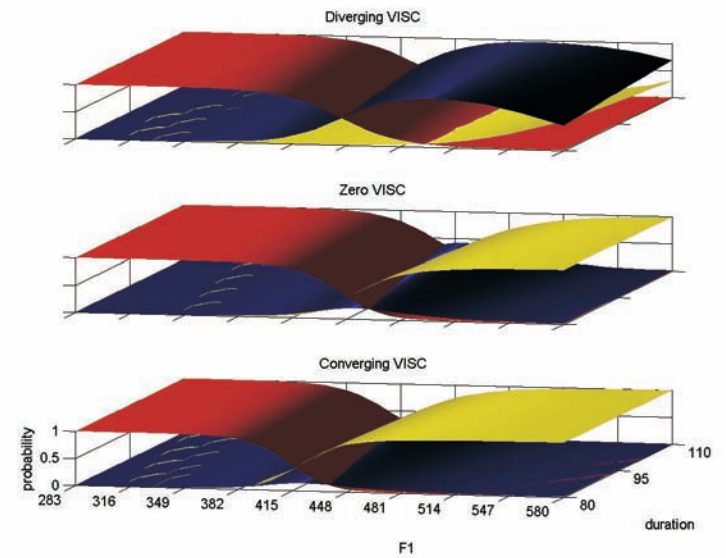
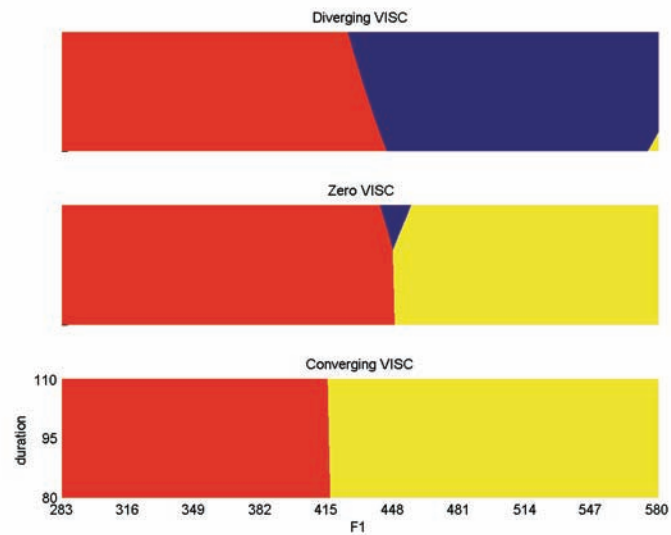


Monolingual-Mexican-Spanish listeners

listener: ms147

$G^2(170)$: 70

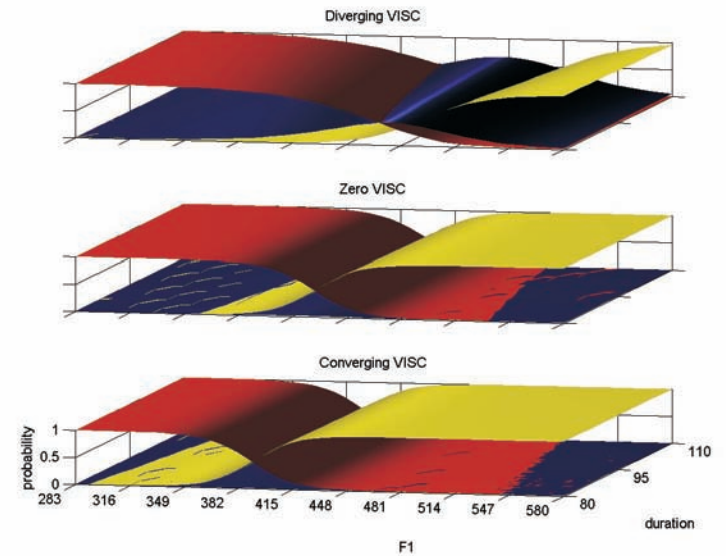
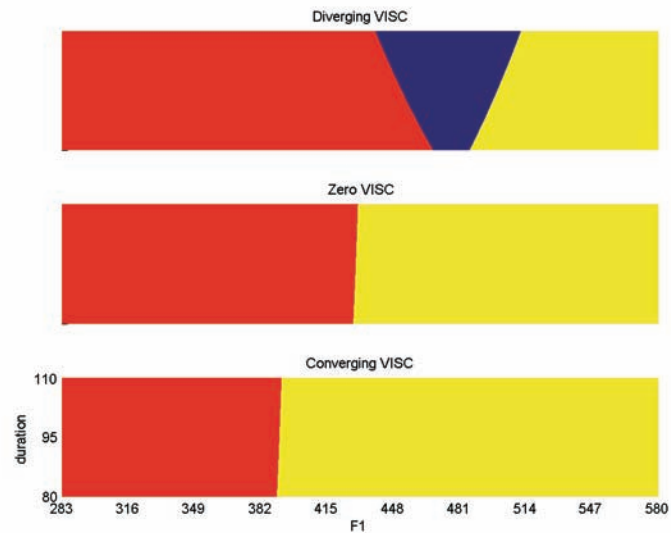
SAEP: 7%



listener: ms148

$G^2(170)$: 73

SAEP: 6%



Spanish

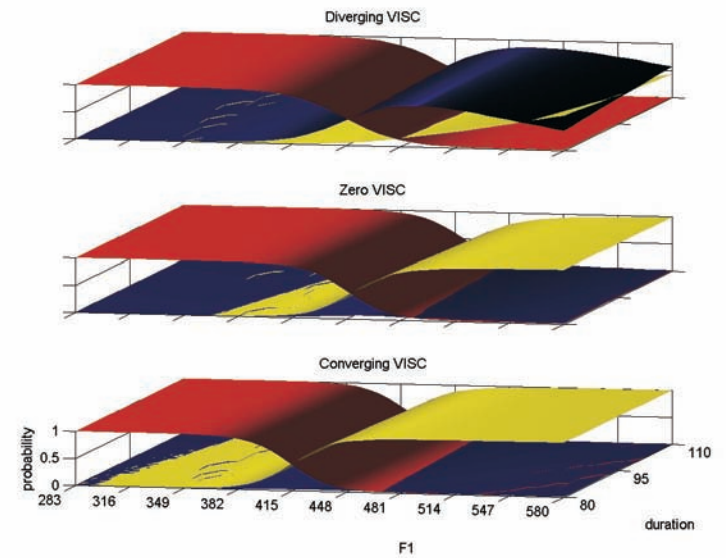
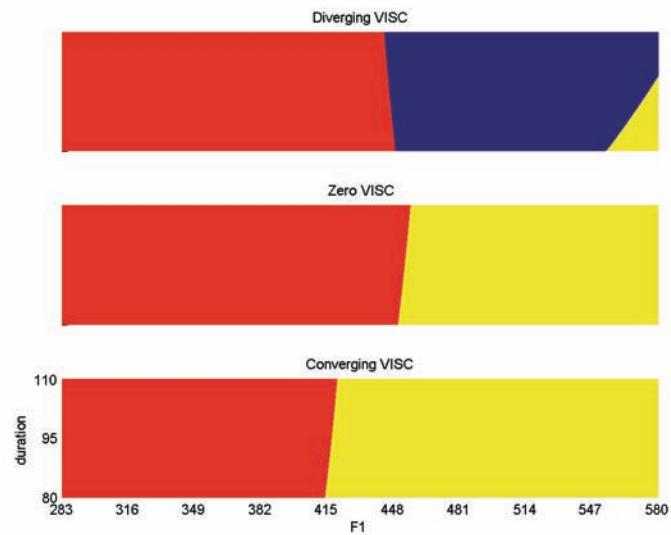


Monolingual-Mexican-Spanish listeners

listener: ms149

$G^2(170)$: 45

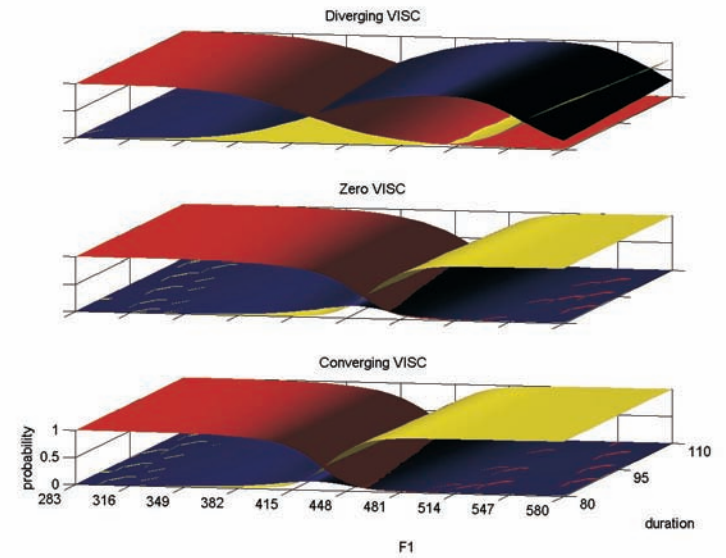
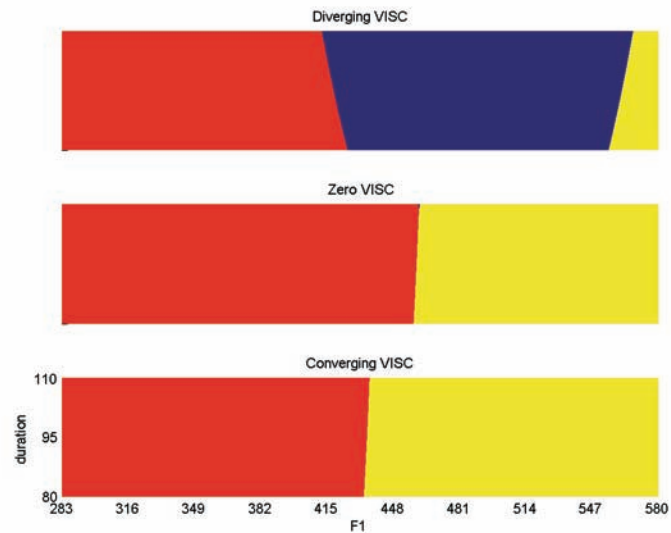
SAEP: 5%



listener: ms150

$G^2(170)$: 70

SAEP: 7%



Spanish



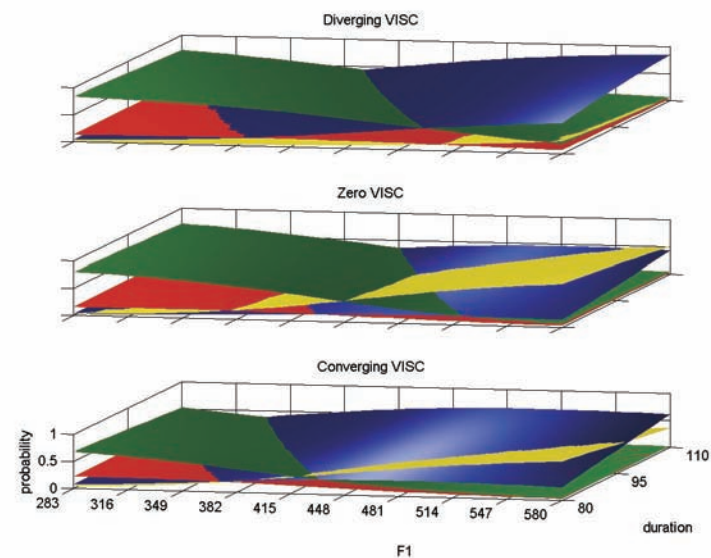
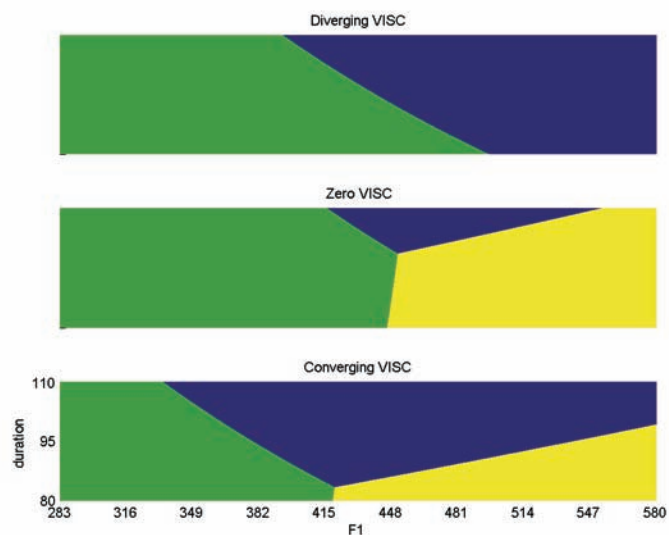
Stage 0 - Hypothesised indirect developmental path

listener: bs071

Mexican

$G^2(255)$: 244

SAEP: 27%

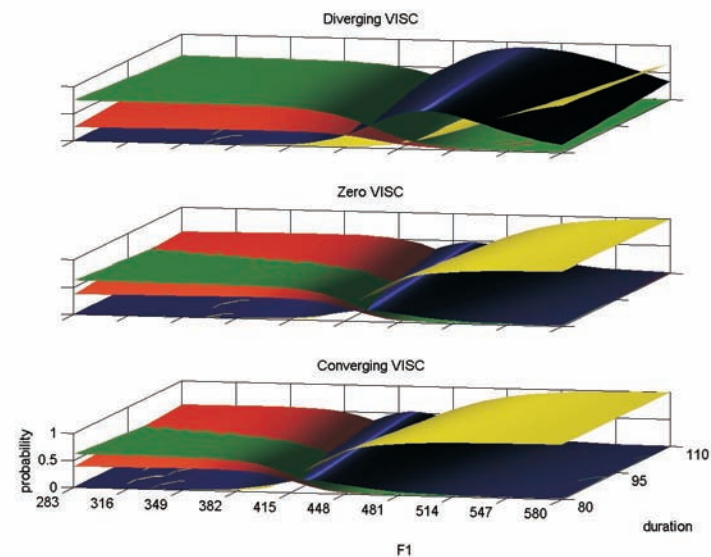
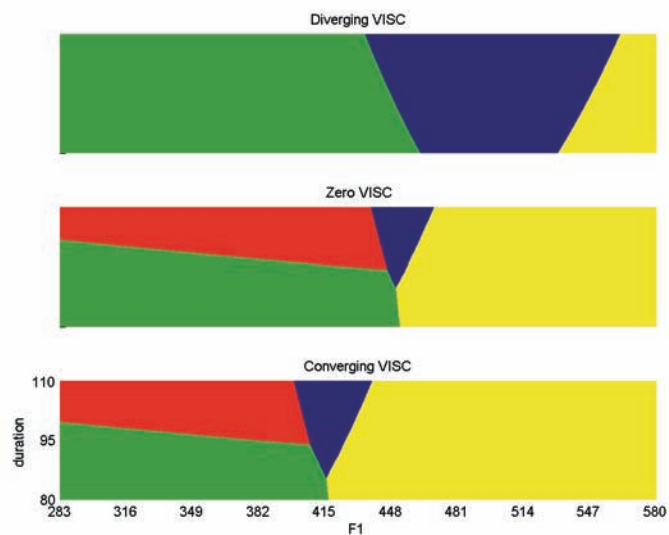


listener: bs114

Mexican

$G^2(255)$: 118

SAEP: 15%



English



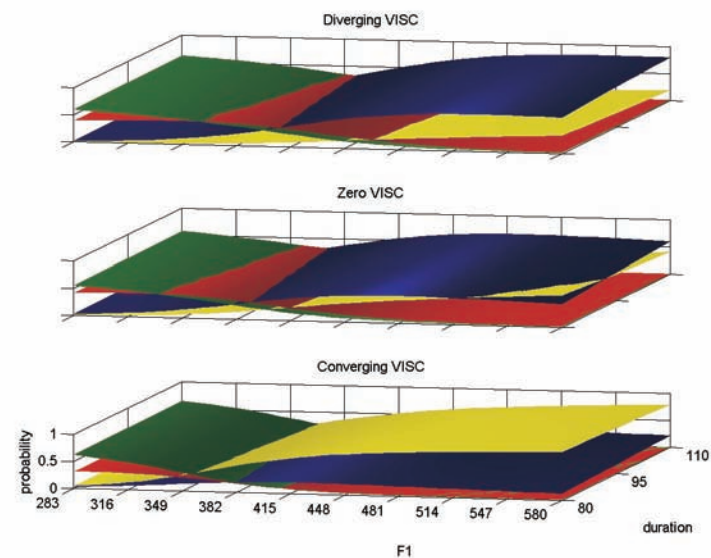
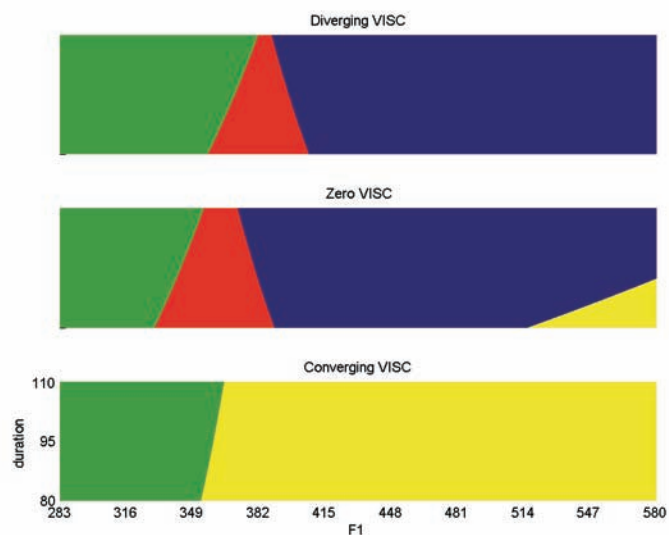
Stage 0 - Hypothesised indirect developmental path

listener: bs088

Mexican

$G^2(255)$: 237

SAEP: 24%

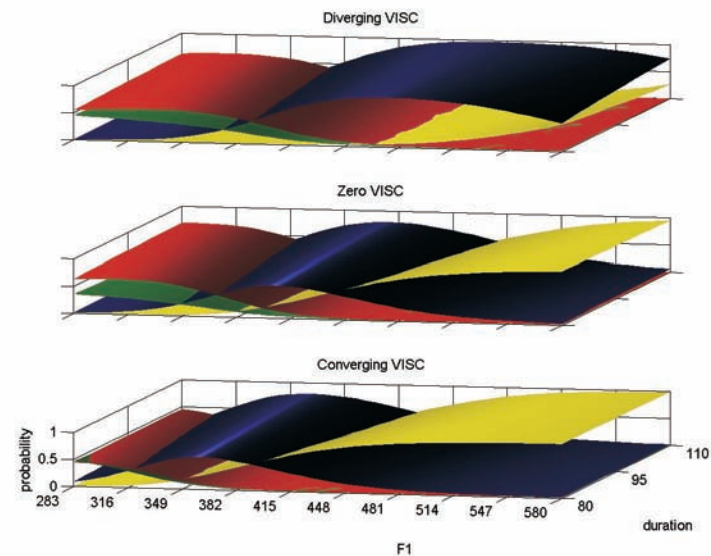
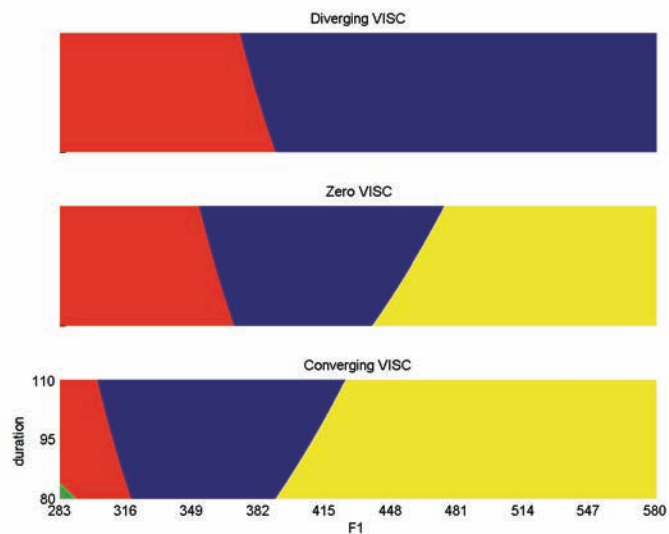


listener: bs065

Mexican

$G^2(255)$: 119

SAEP: 14%



English



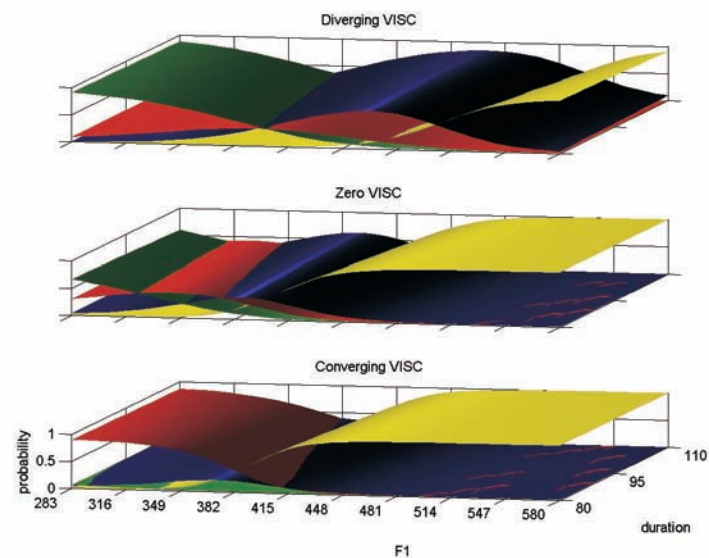
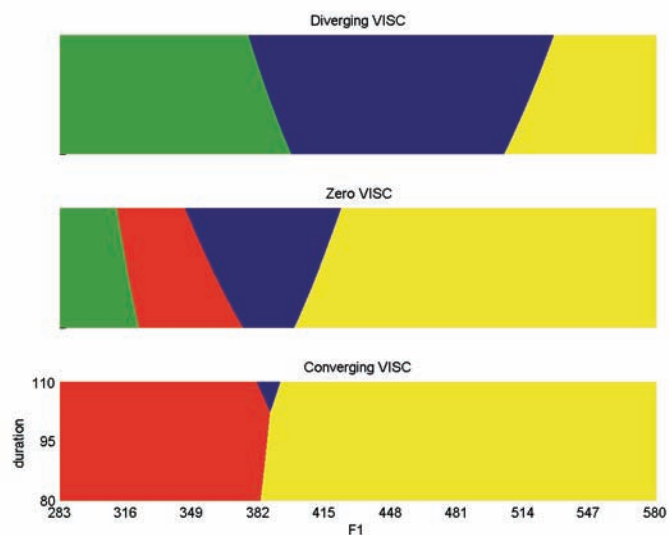
Stage 1/2 - Hypothesised indirect developmental path

listener: bs050

Mexican

$G^2(255)$: 190

SAEP: 16%

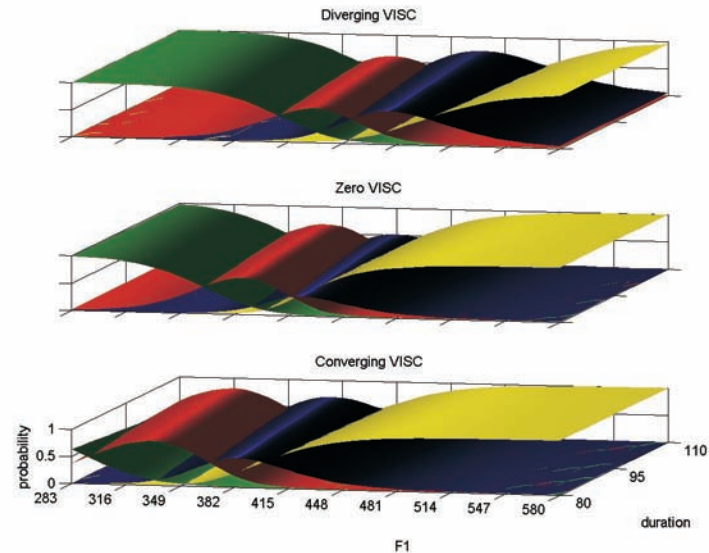
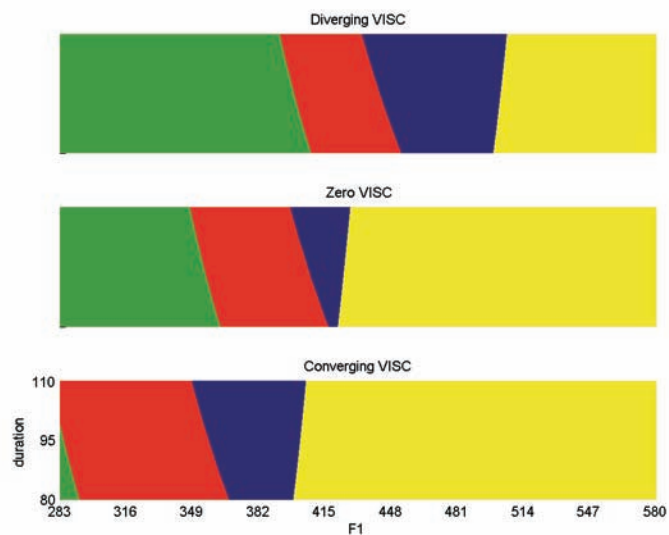


listener: bs076

Mexican

$G^2(255)$: 126

SAEP: 12%



English



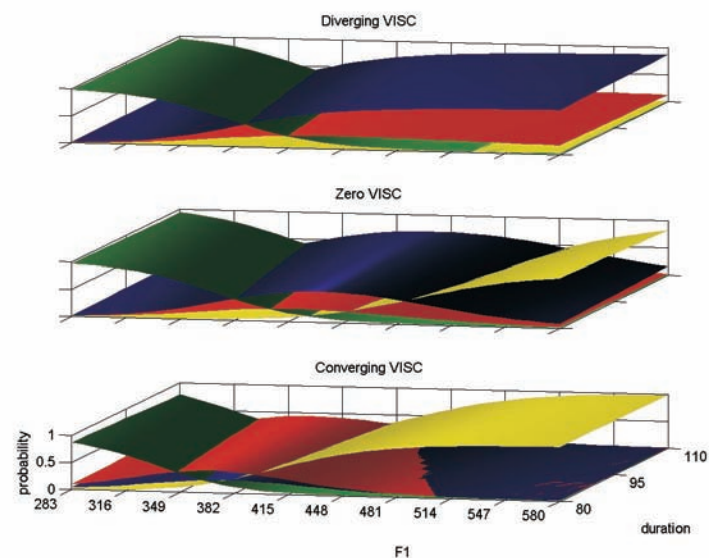
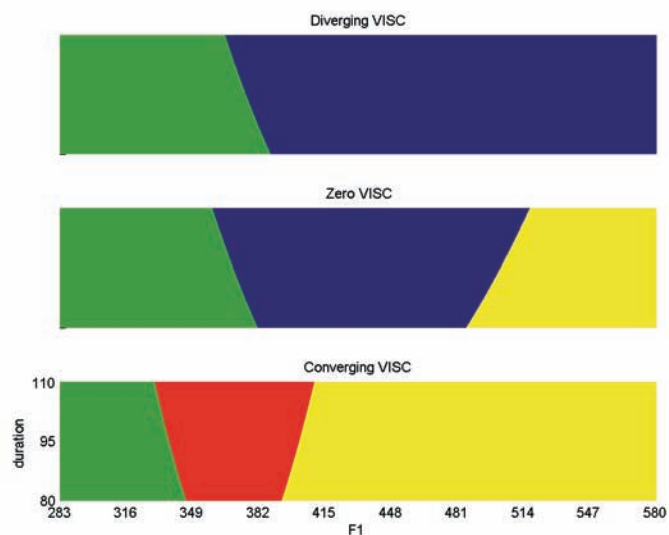
Stage 1/2 - Hypothesised indirect developmental path

listener: bs051

Mexican

$G^2(255)$: 237

SAEP: 23%

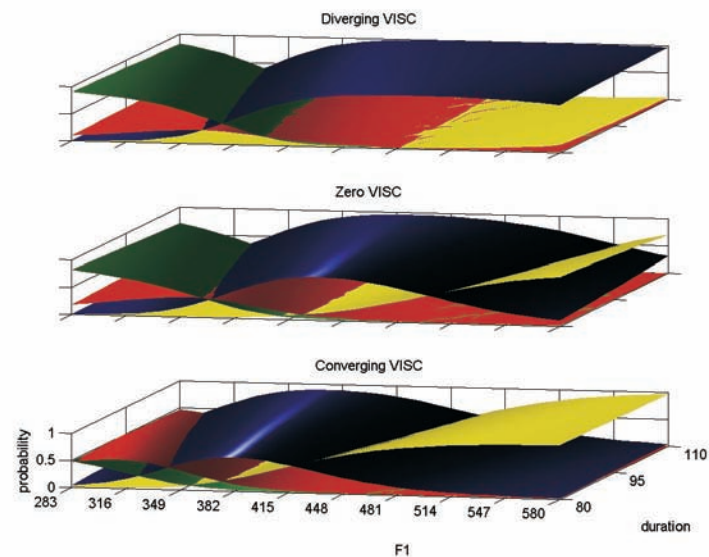
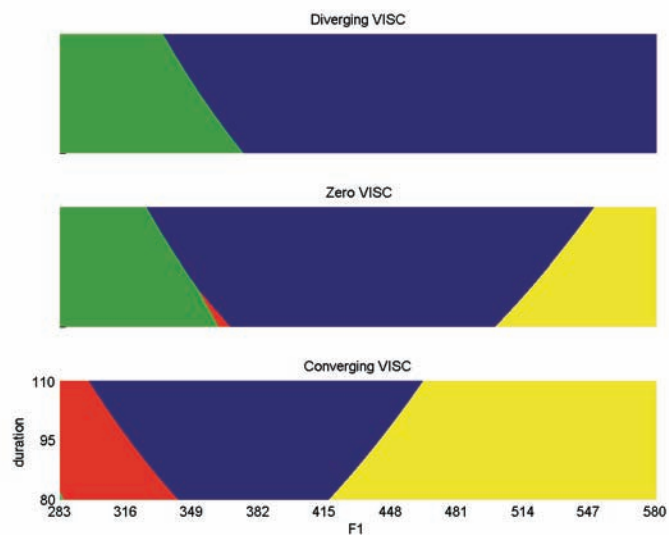


listener: bs069

Peruvian

$G^2(255)$: 132

SAEP: 15%



English



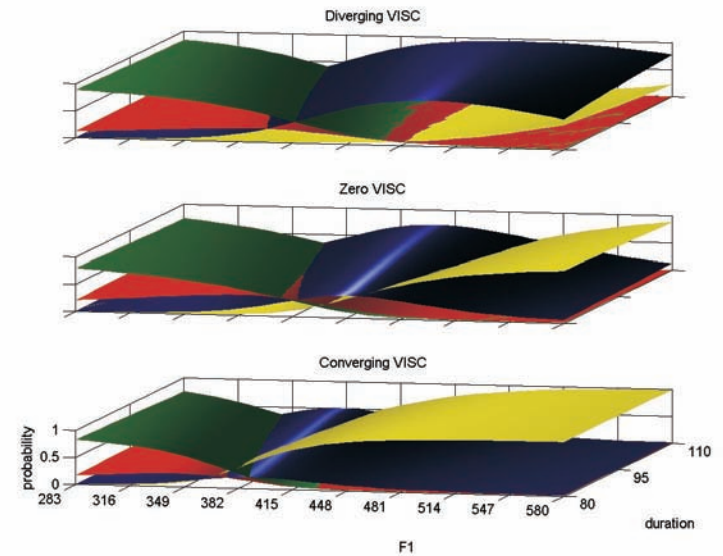
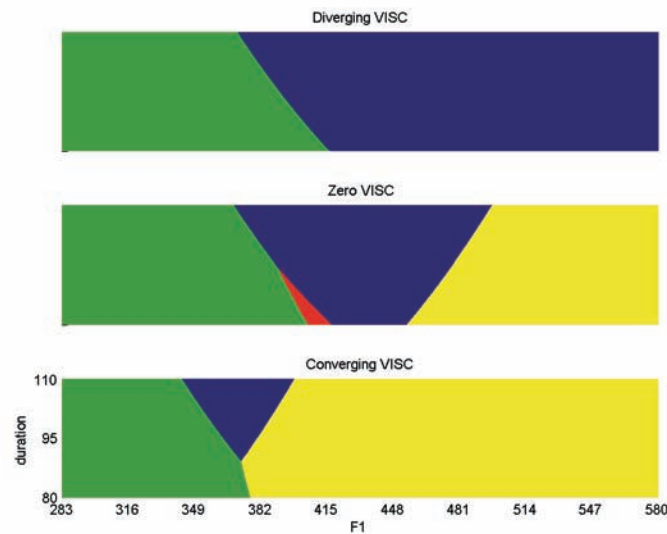
Stage 1/2 - Hypothesised indirect developmental path

listener: bs052

Salvadorean

$G^2(255)$: 166

SAEP: 16%

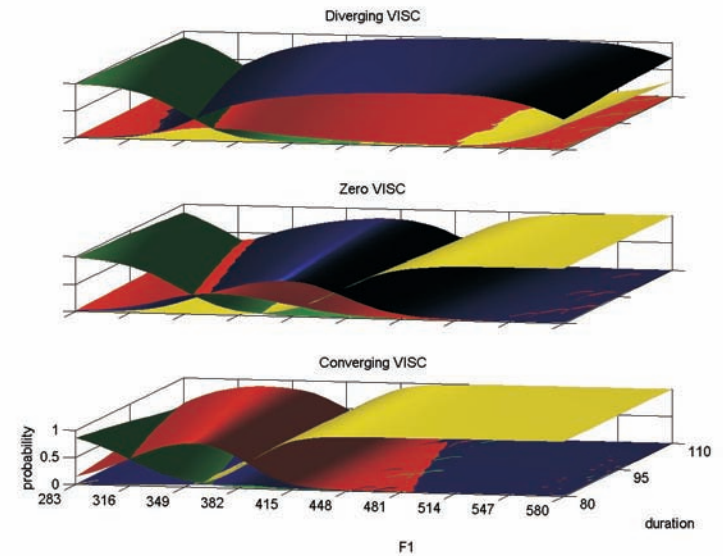
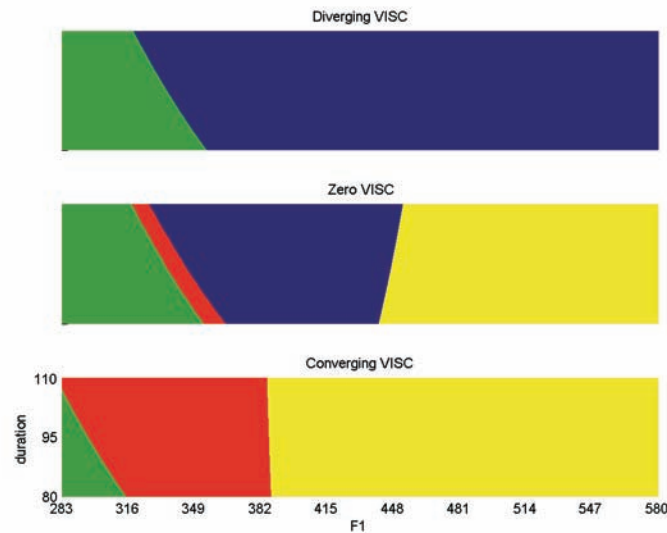


listener: bs064

Mexican

$G^2(255)$: 104

SAEP: 10%



English



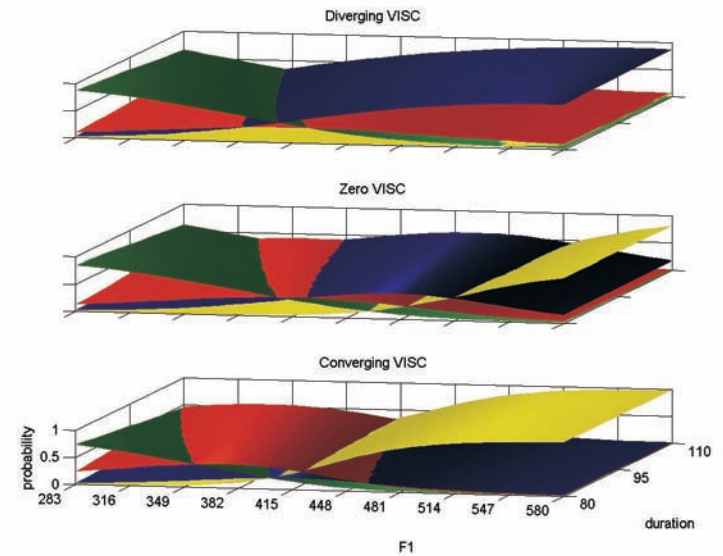
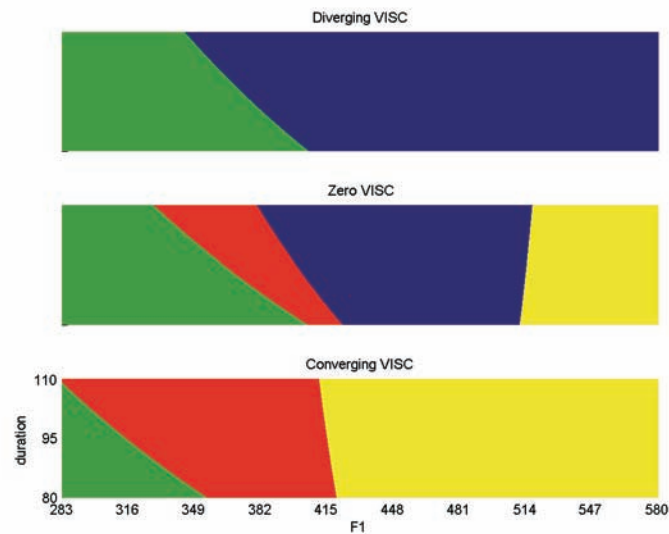
Stage 1/2 - Hypothesised indirect developmental path

listener: bs001

Mexican

$G^2(255)$: 201

SAEP: 22%

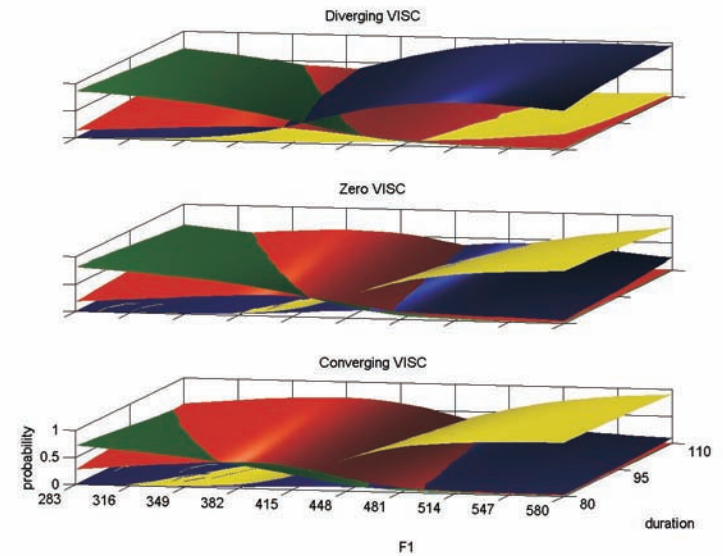
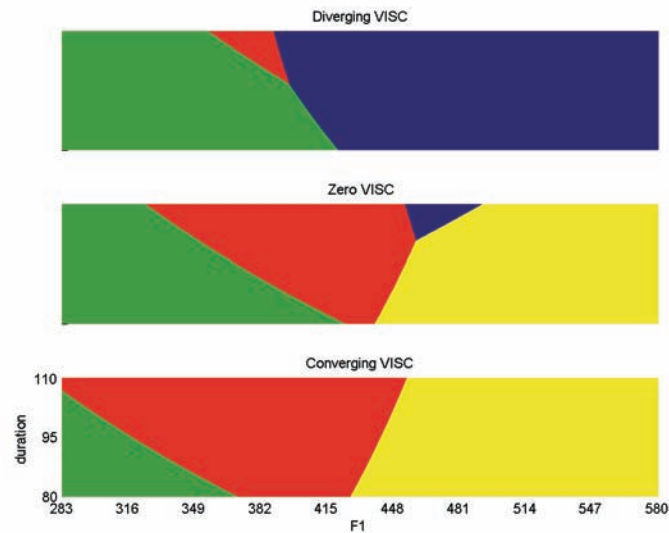


listener: bs075

Venezuelan

$G^2(255)$: 144

SAEP: 17%



English



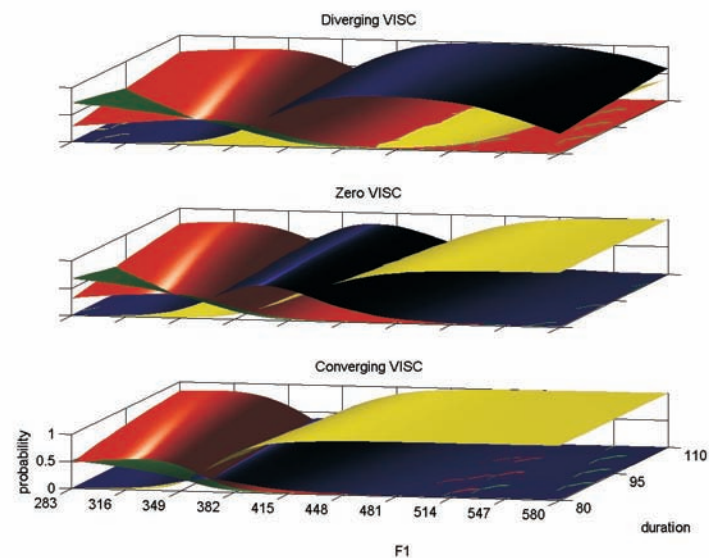
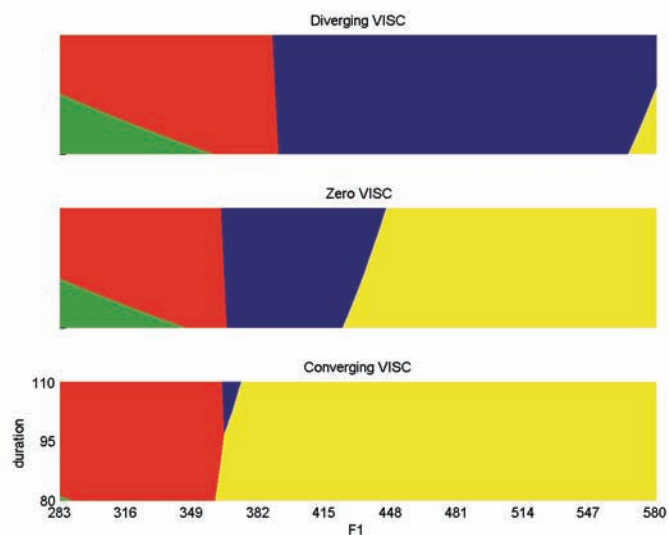
Stage 1/2 - Hypothesised indirect developmental path

listener: bs072

Mexican

$G^2(255)$: 93

SAEP: 11%

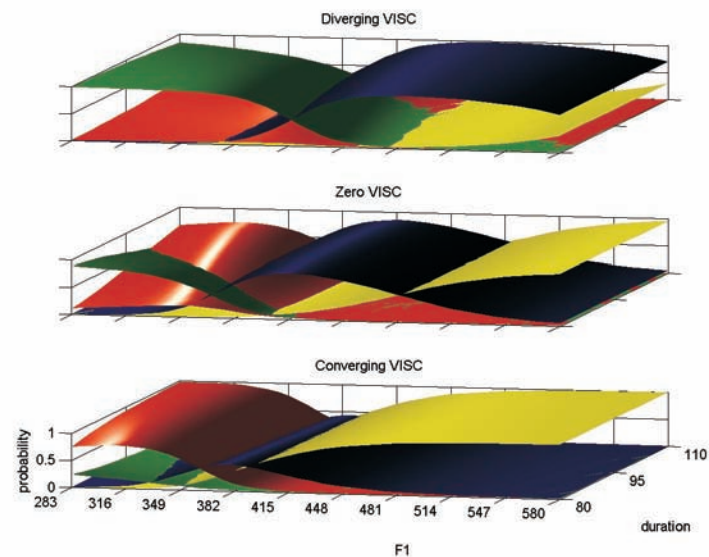
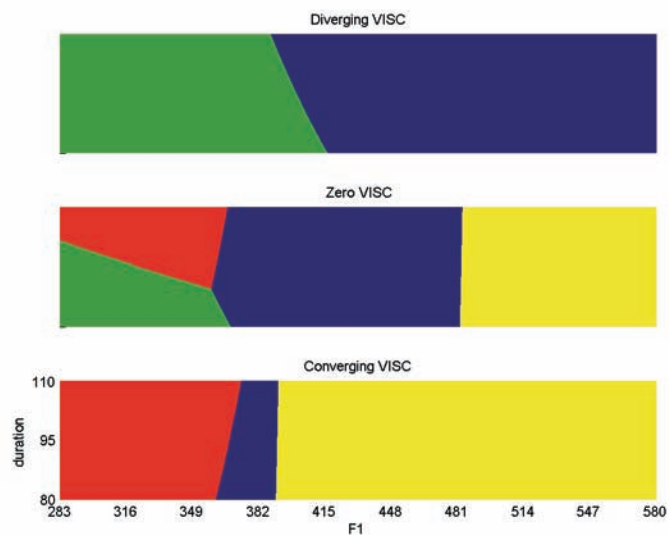


listener: bs003

Spanish

$G^2(255)$: 108

SAEP: 12%



English



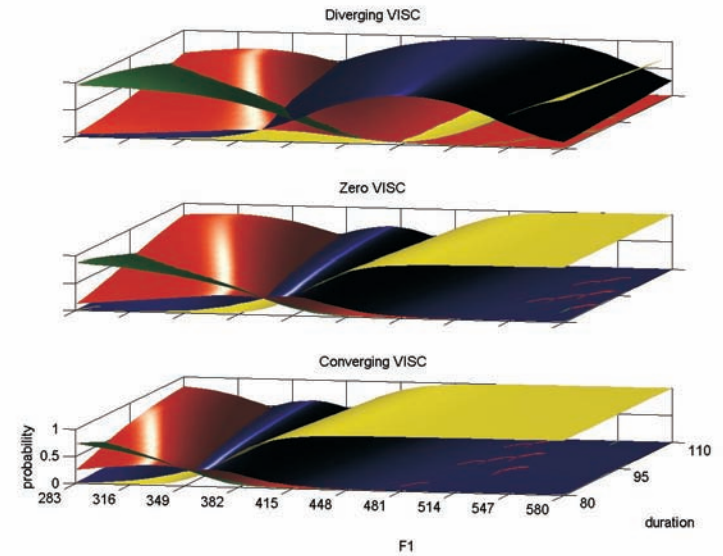
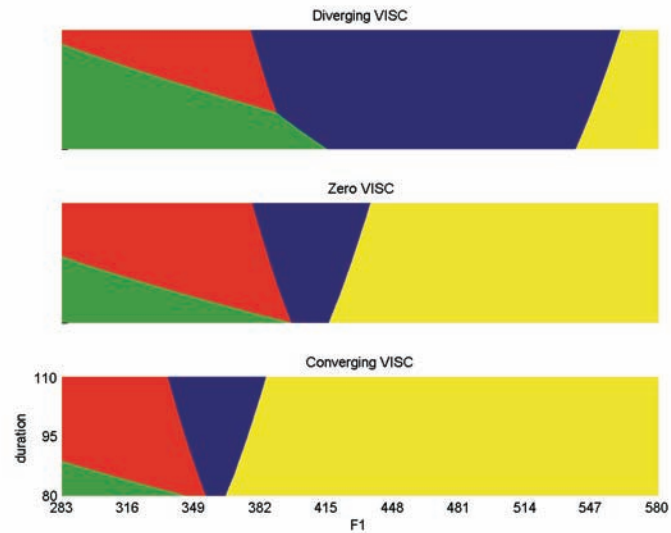
Stage 1/2 - Hypothesised indirect developmental path

listener: bs087

Mexican

$G^2(255)$: 173

SAEP: 15%



English



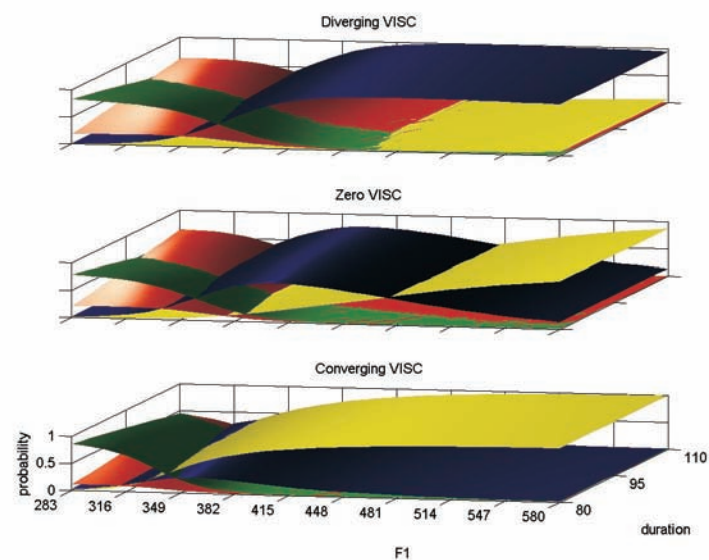
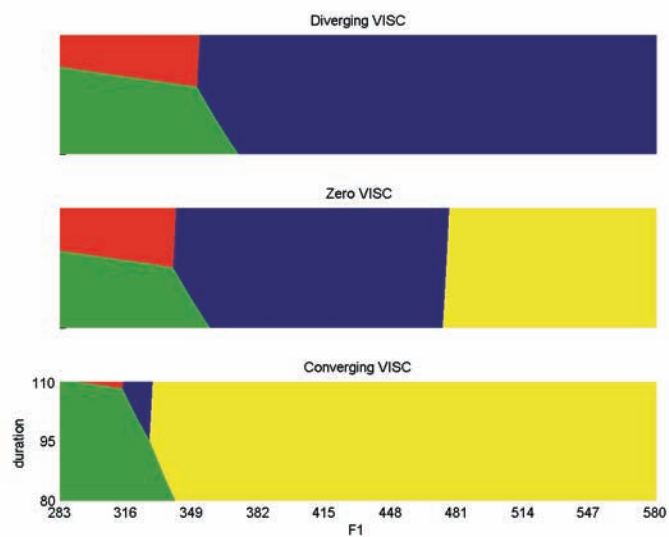
Stage 1 - Hypothesised indirect developmental path

listener: bs083

Argentinian

$G^2(255)$: 146

SAEP: 14%

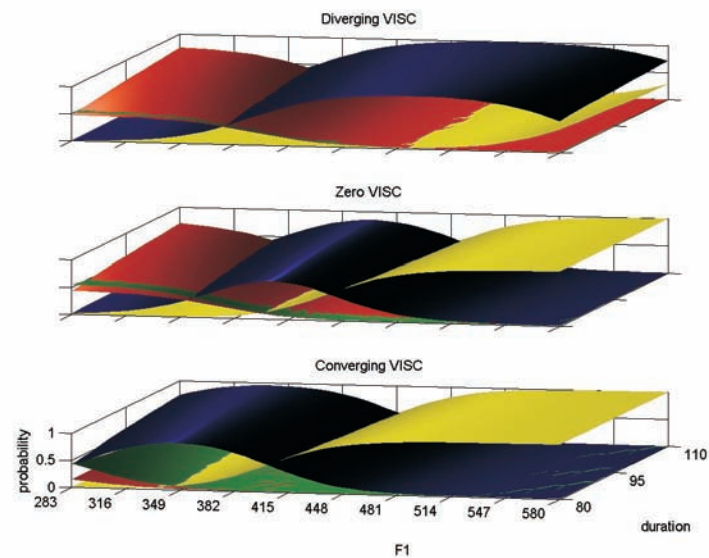
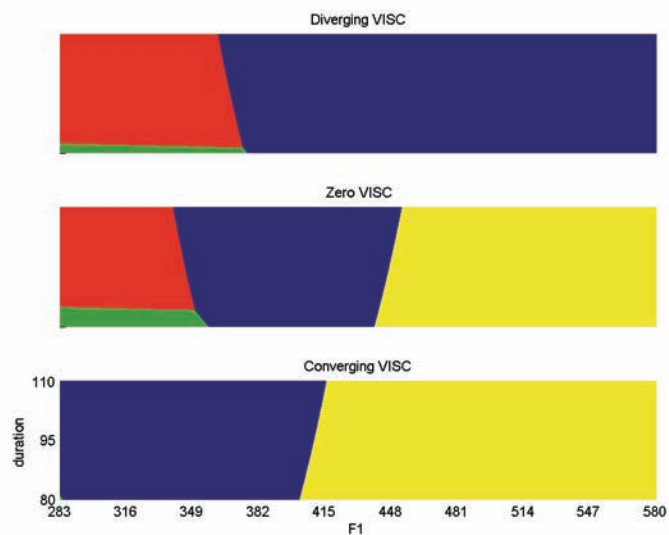


listener: bs081

Peruvian

$G^2(255)$: 116

SAEP: 13%



English



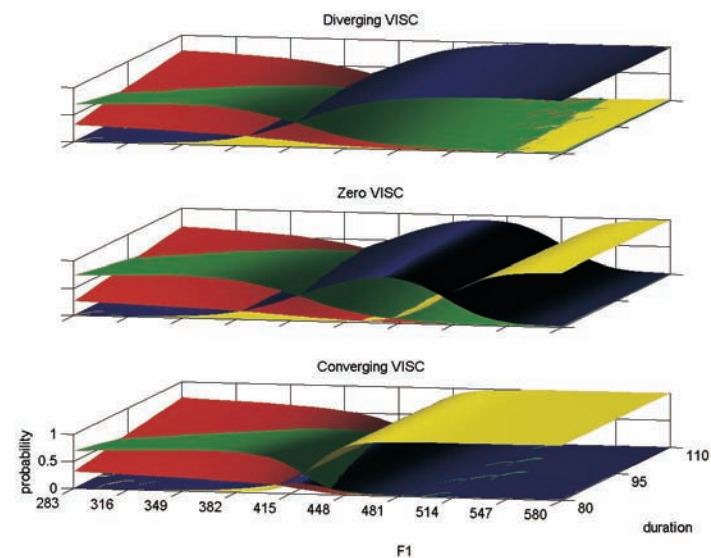
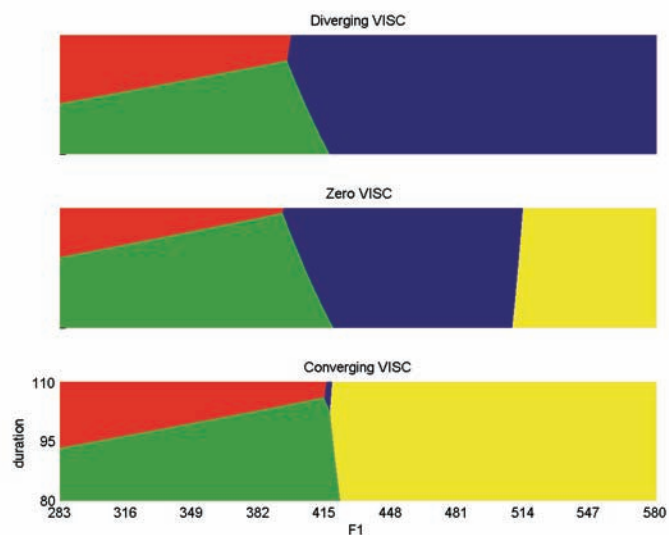
Stage 1 - Hypothesised indirect developmental path

listener: bs058

Spanish

$G^2(255)$: 105

SAEP: 12%

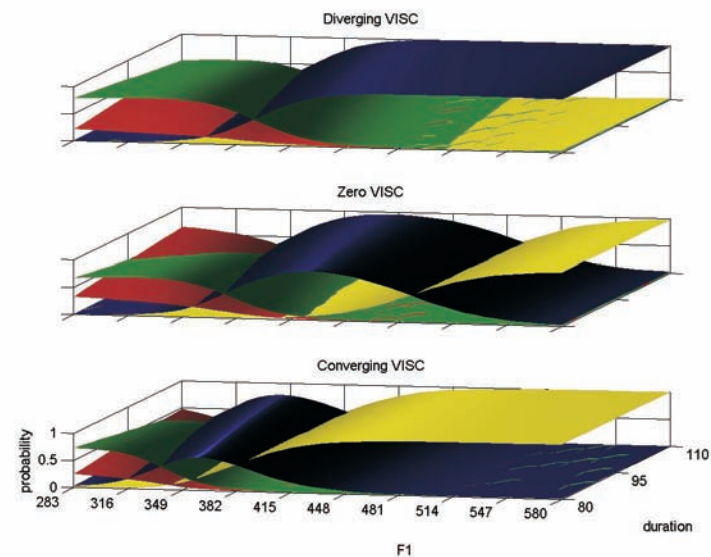
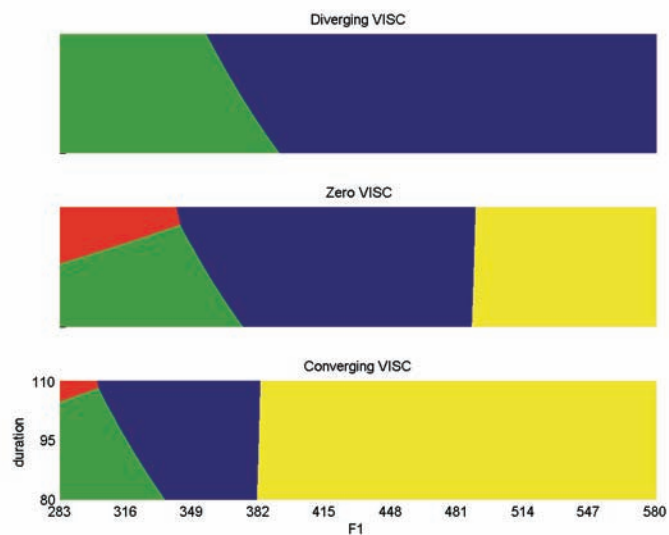


listener: bs016

Columbian

$G^2(255)$: 117

SAEP: 11%



English



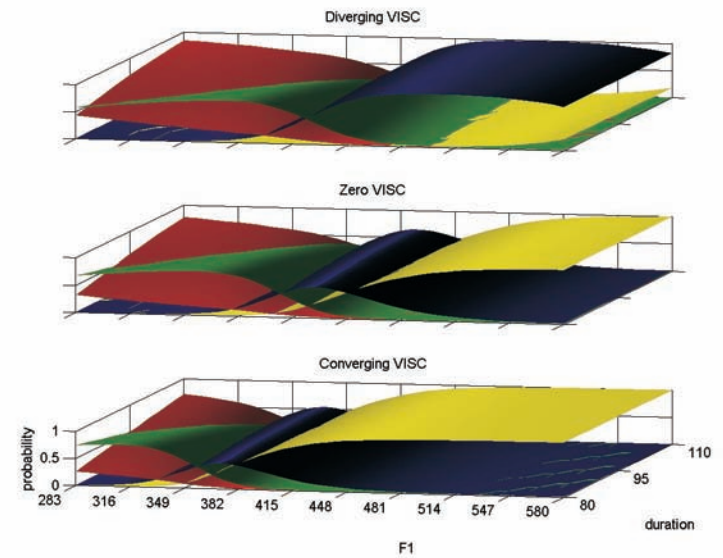
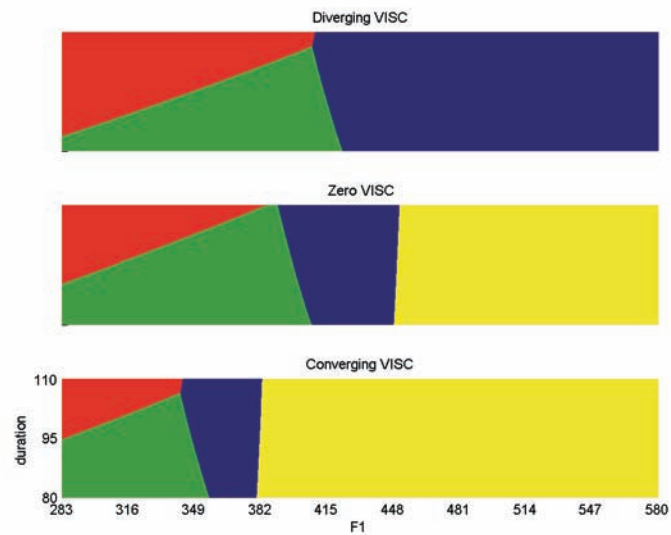
Stage 1 - Hypothesised indirect developmental path

listener: bs091

Spanish

$G^2(255)$: 120

SAEP: 13%



English



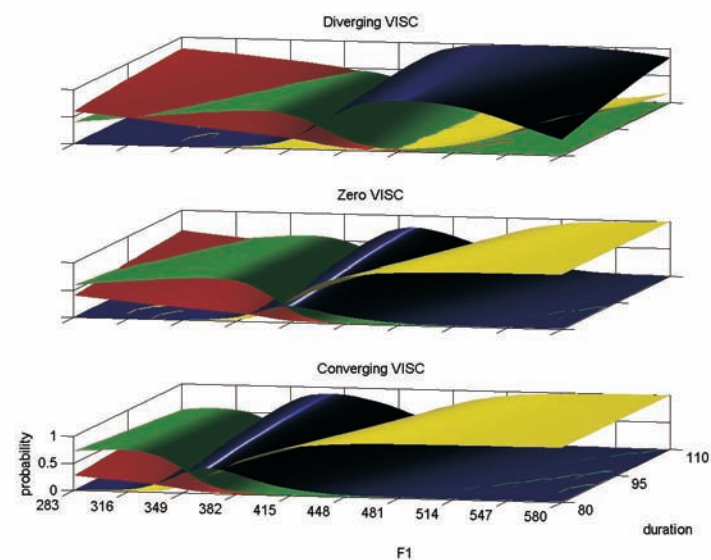
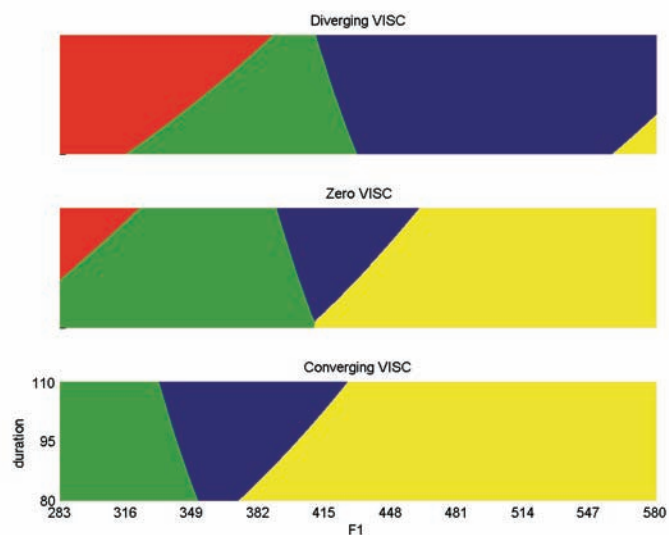
Stage 2 - Hypothesised indirect developmental path

listener: bs062

Mexican

$G^2(255)$: 137

SAEP: 13%

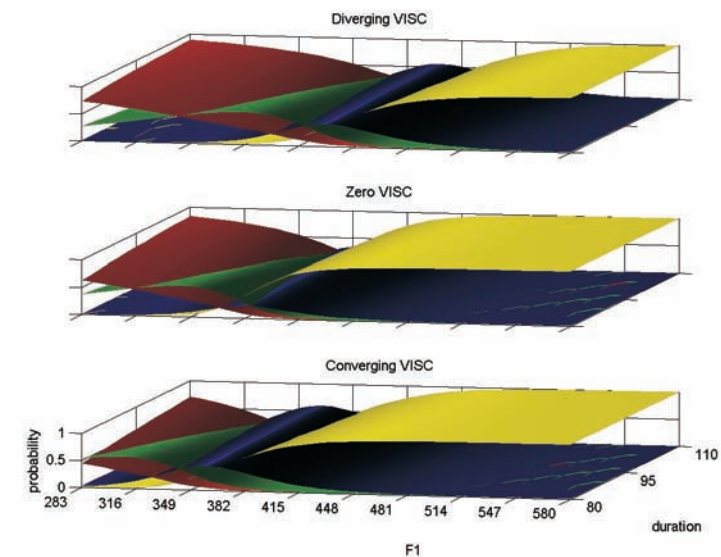
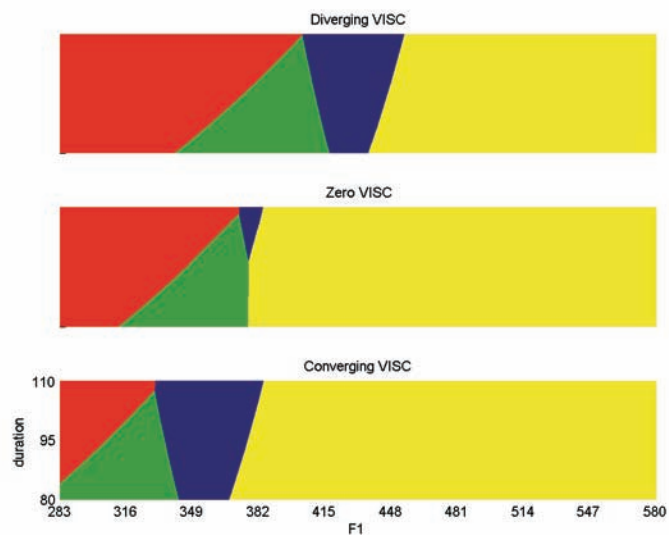


listener: bs019

Mexican

$G^2(255)$: 125

SAEP: 12%



English



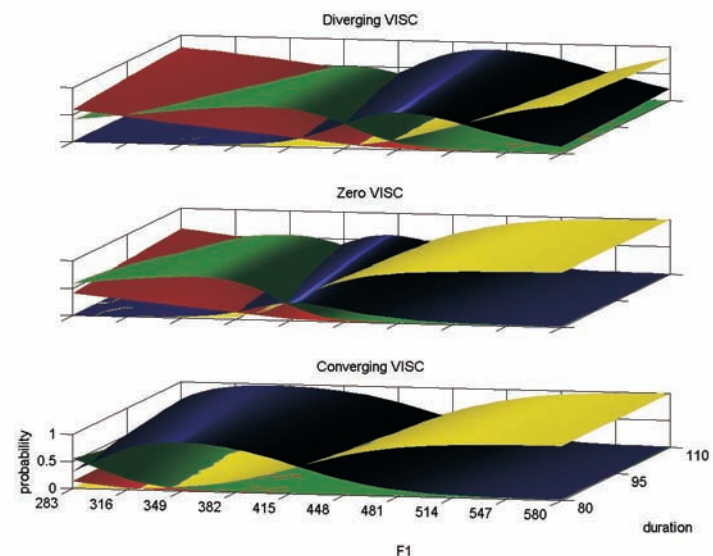
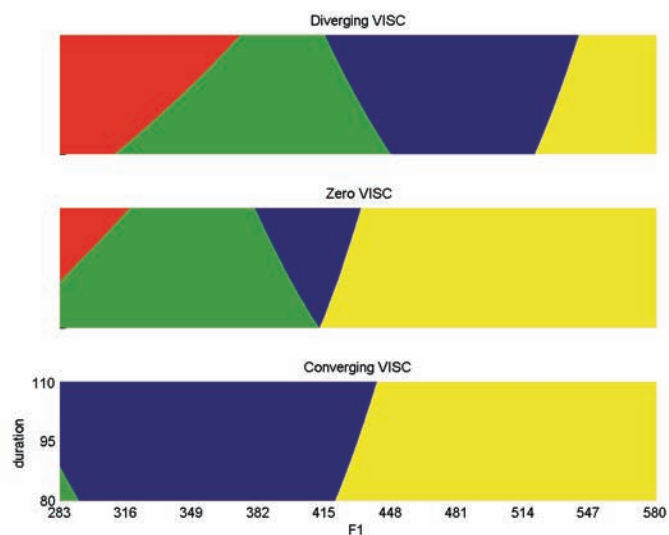
Stage 2 - Hypothesised indirect developmental path

listener: bs049

Venezuelan

$G^2(255)$: 132

SAEP: 15%

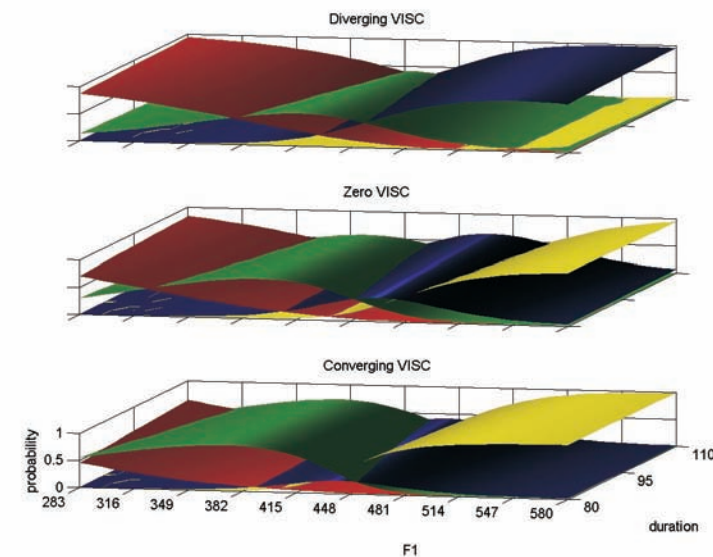
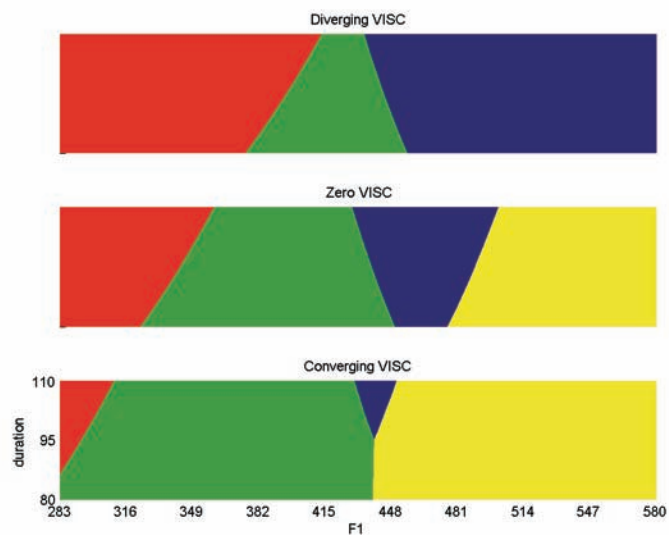


listener: bs056

Columbian

$G^2(255)$: 136

SAEP: 16%



English



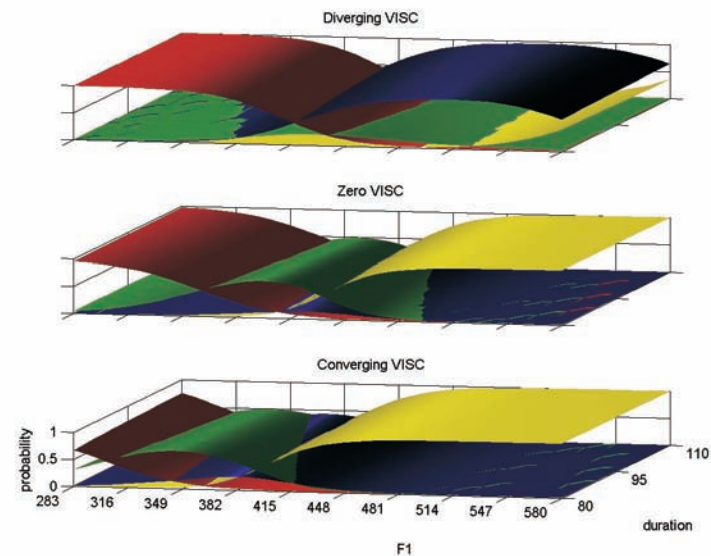
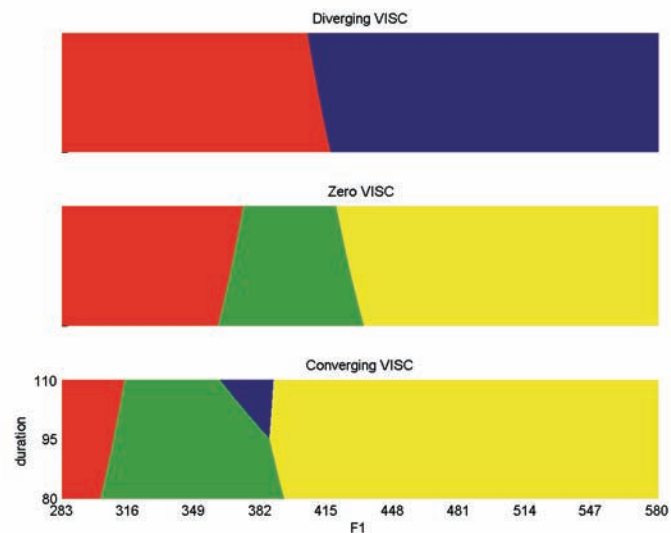
Stage 3 - Hypothesised indirect developmental path

listener: bs067

Argentinian

$G^2(255)$: 150

SAEP: 13%

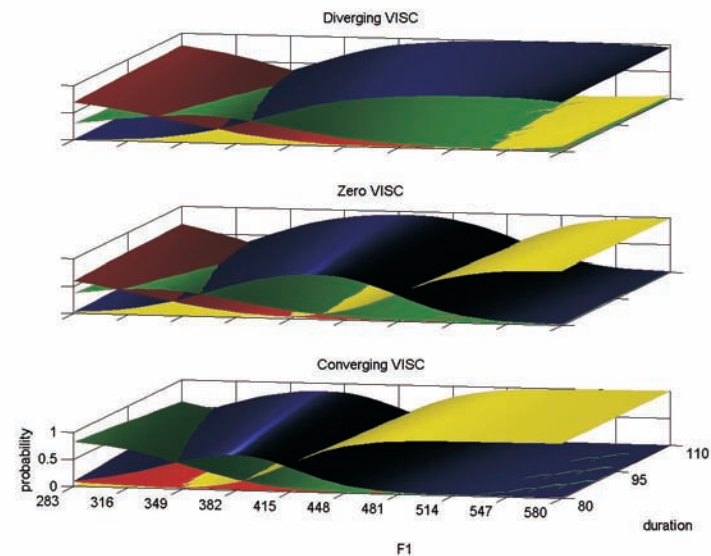
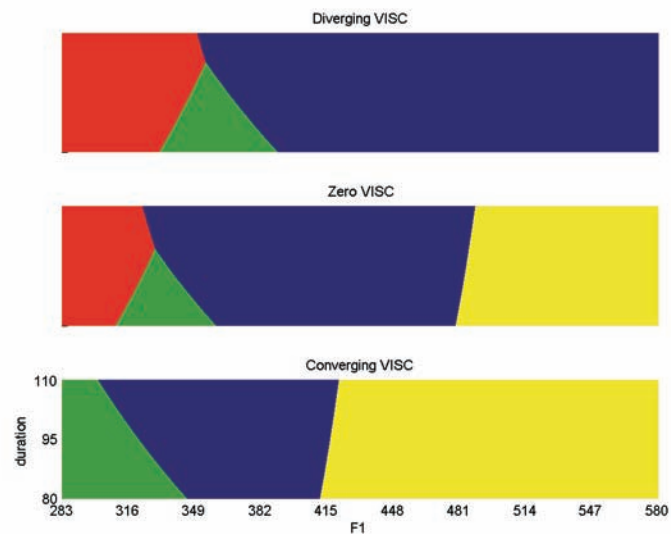


listener: bs028

Mexican

$G^2(255)$: 158

SAEP: 15%



English



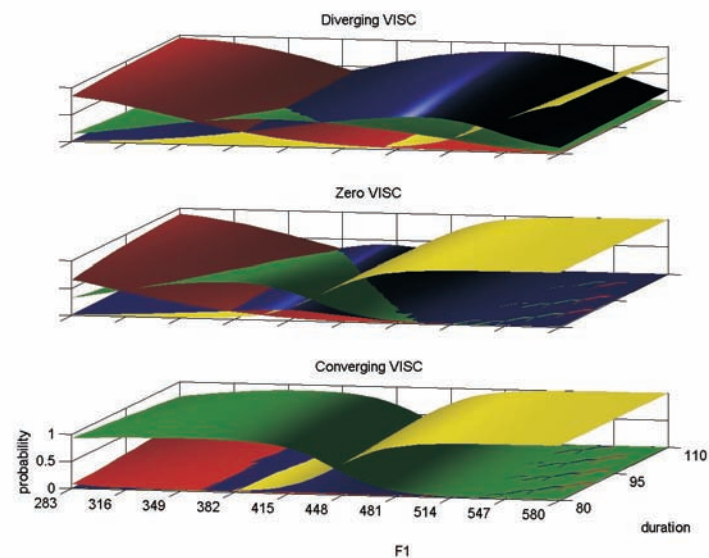
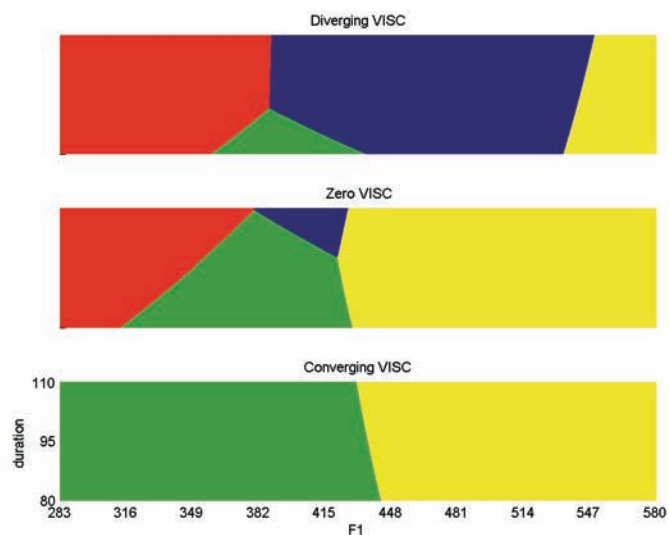
Stage 3 - Hypothesised indirect developmental path

listener: bs073

Mexican

$G^2(255)$: 205

SAEP: 18%

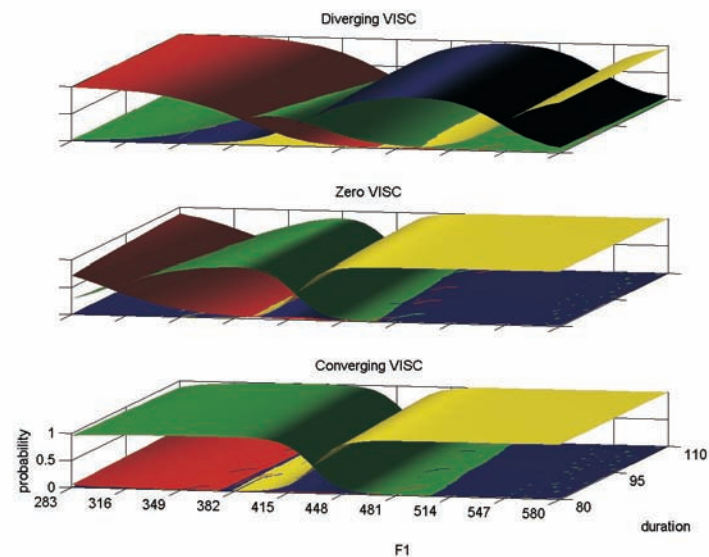
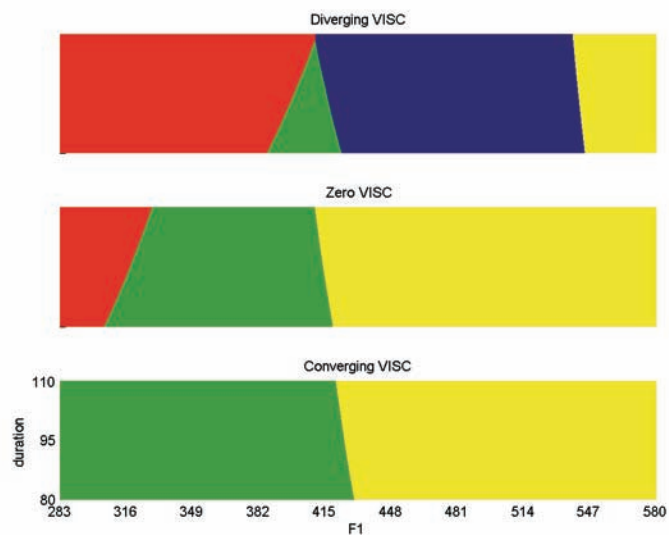


listener: bs023

Panamanian

$G^2(255)$: 80

SAEP: 7%



English



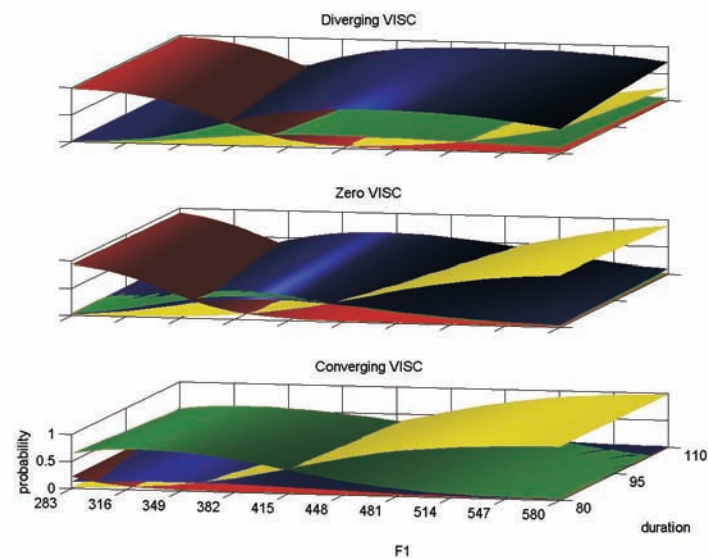
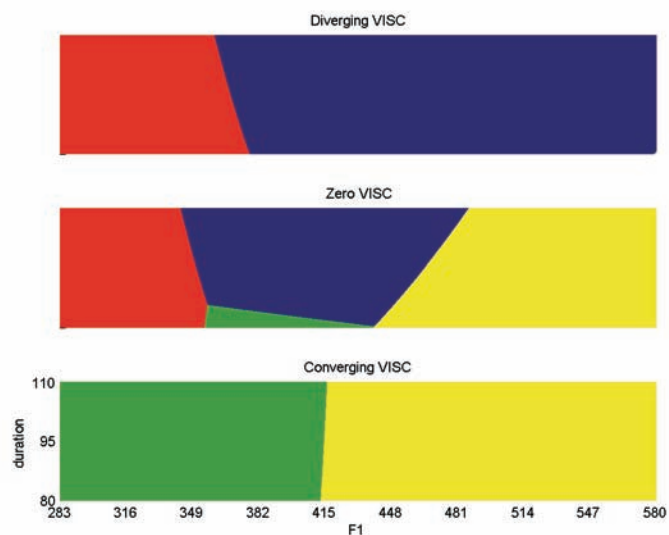
Stage 3 - Hypothesised indirect developmental path

listener: bs077

Peruvian

$G^2(255)$: 216

SAEP: 21%

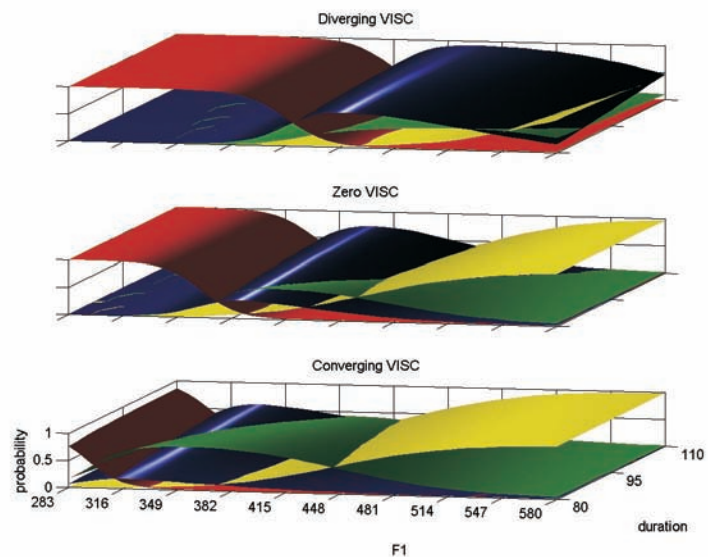
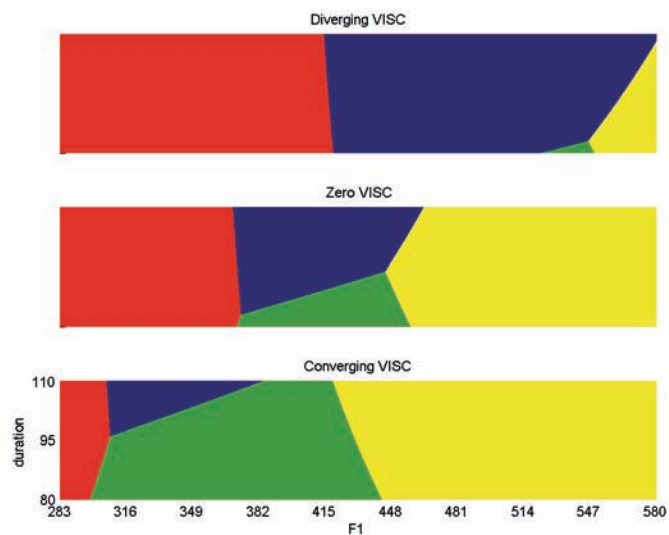


listener: bs057

Peruvian

$G^2(255)$: 162

SAEP: 16%



English



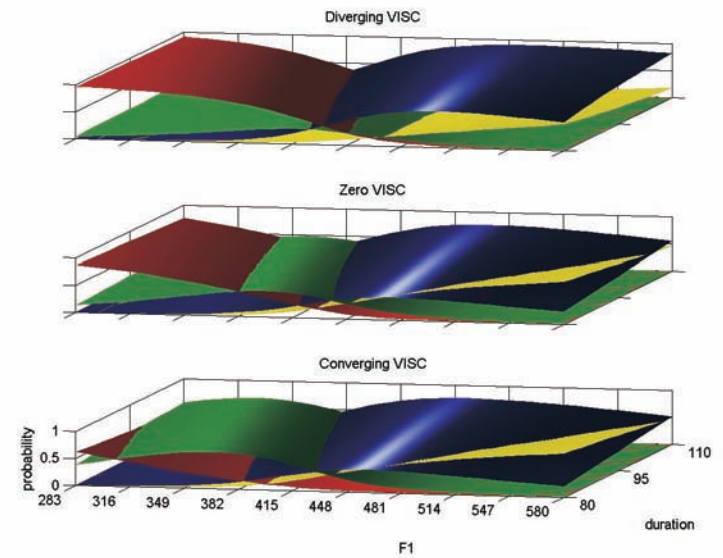
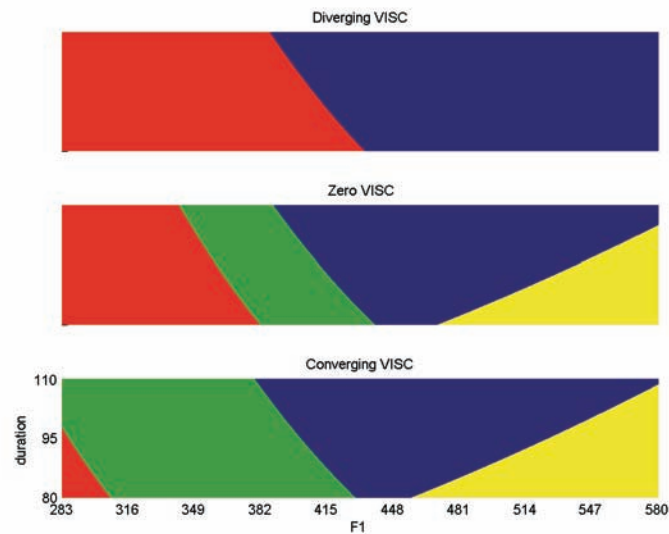
Hypothesised direct developmental path (first stage)

listener: bs061

Columbian

$G^2(255)$: 138

SAEP: 17%

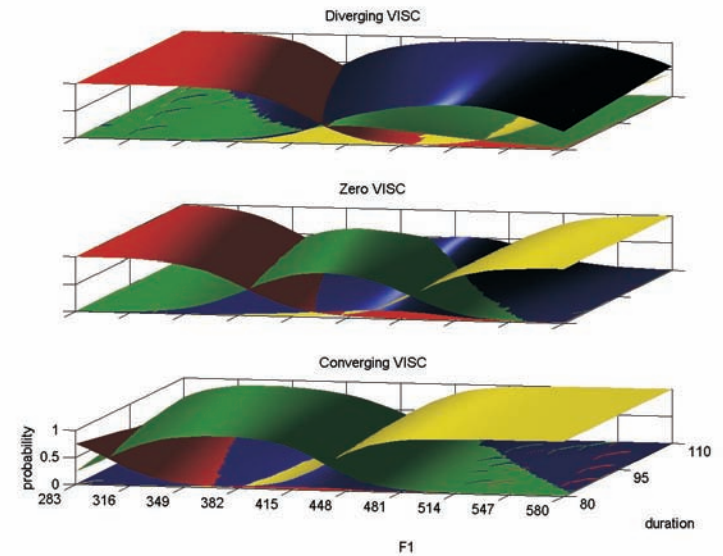
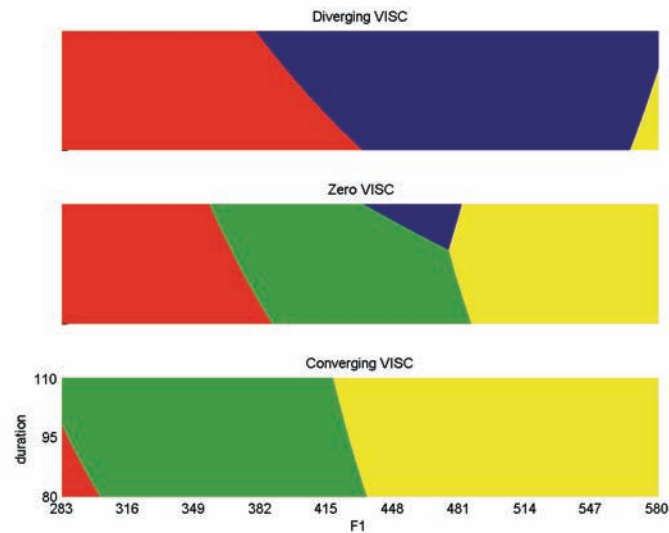


listener: bs082

Mexican

$G^2(255)$: 114

SAEP: 12%



English



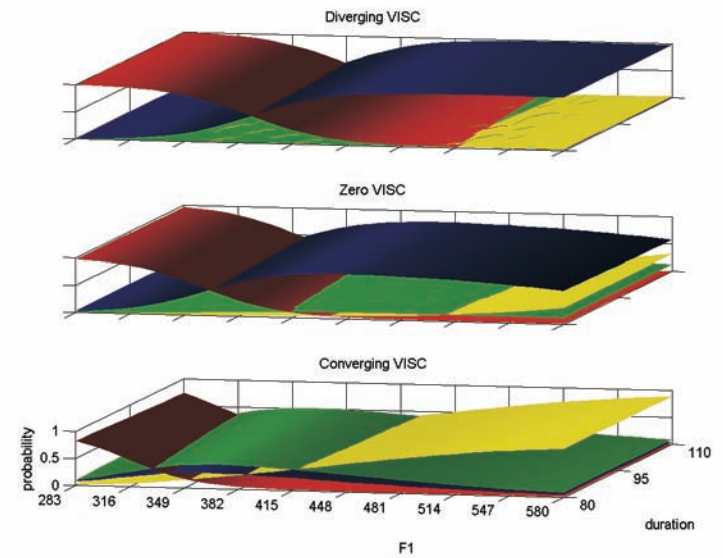
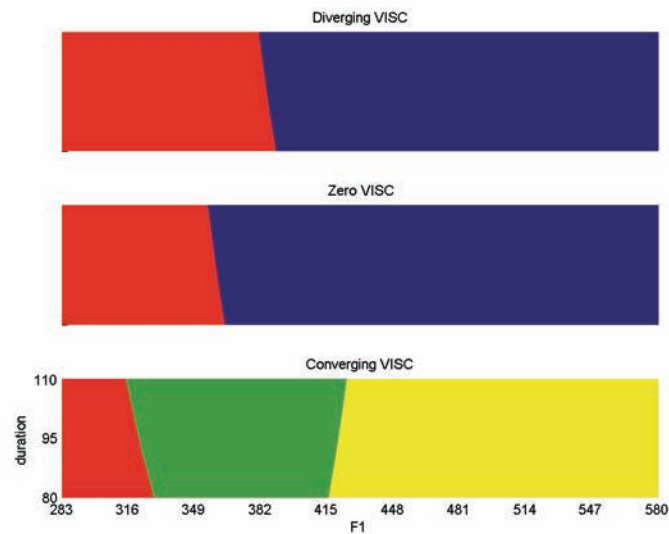
Hypothesised direct developmental path (first stage)

listener: bs002

Bolivian

$G^2(255)$: 140

SAEP: 15%

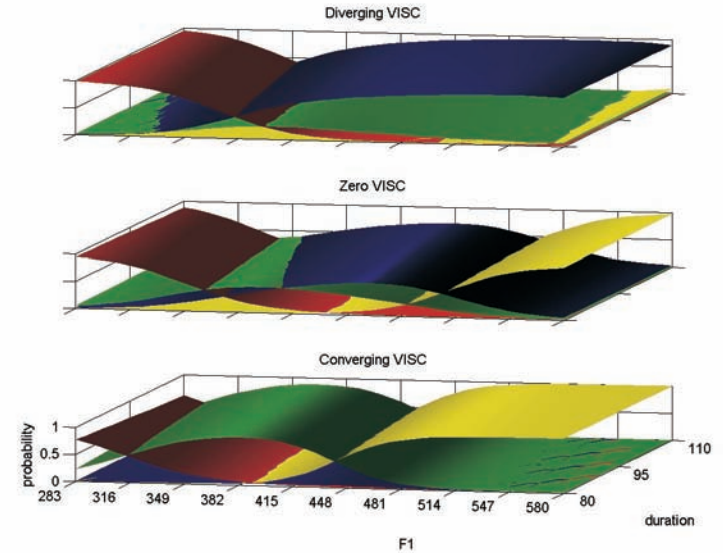
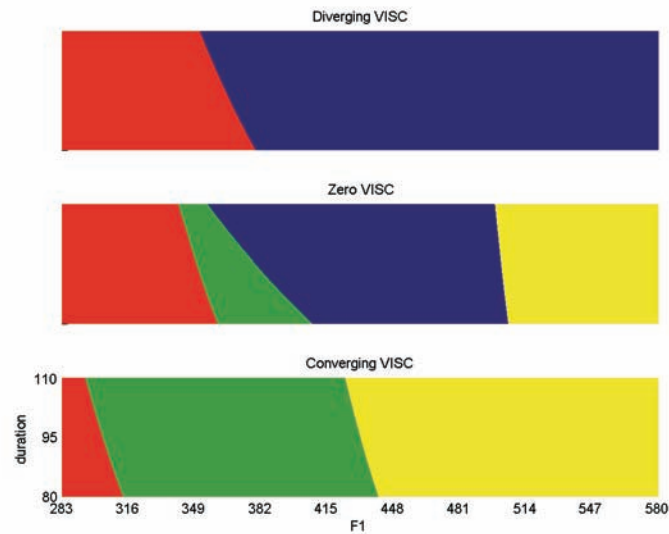


listener: bs074

Mexican

$G^2(255)$: 136

SAEP: 15%



English



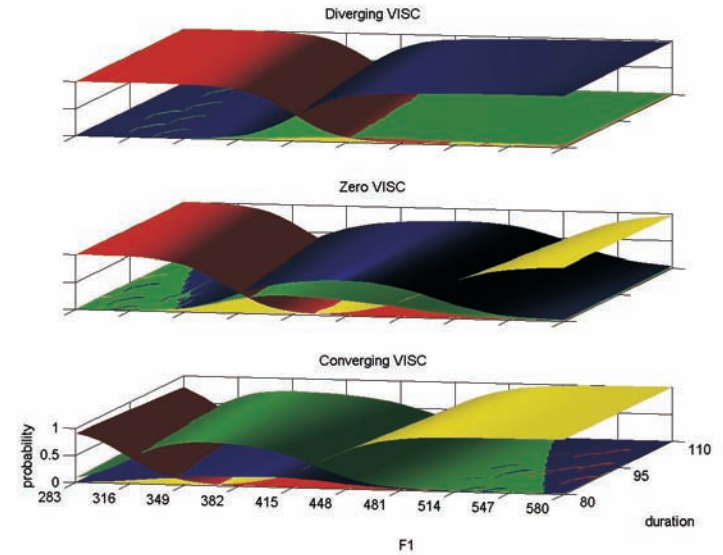
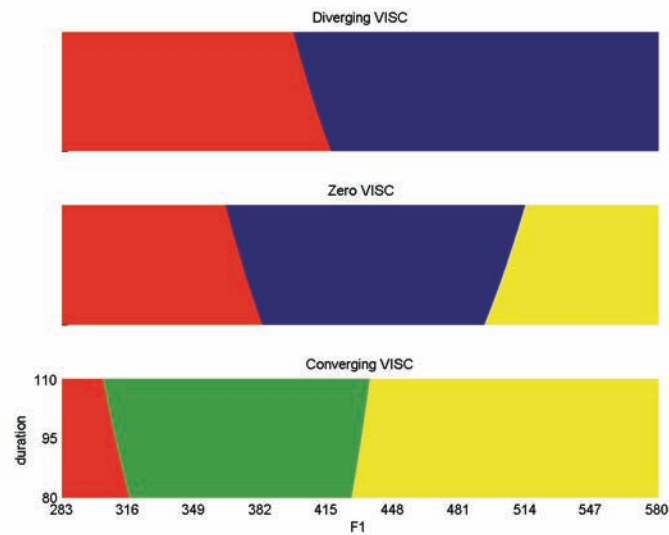
Hypothesised direct developmental path (first stage)

listener: bs068

Mexican

$G^2(255)$: 128

SAEP: 11%

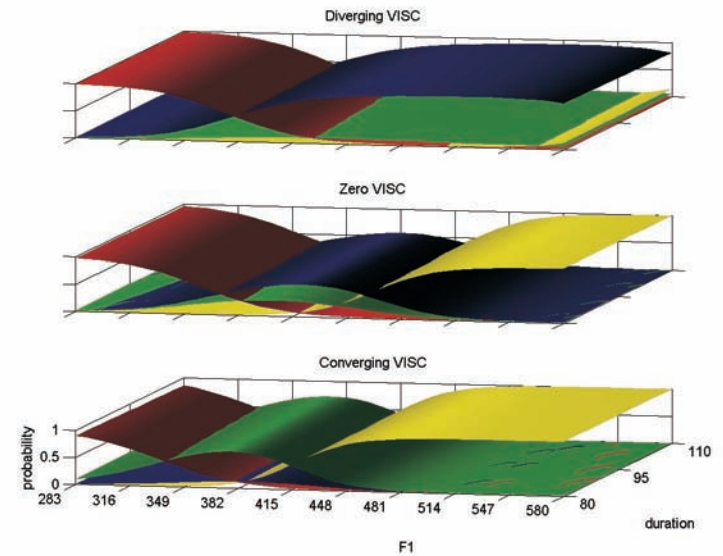
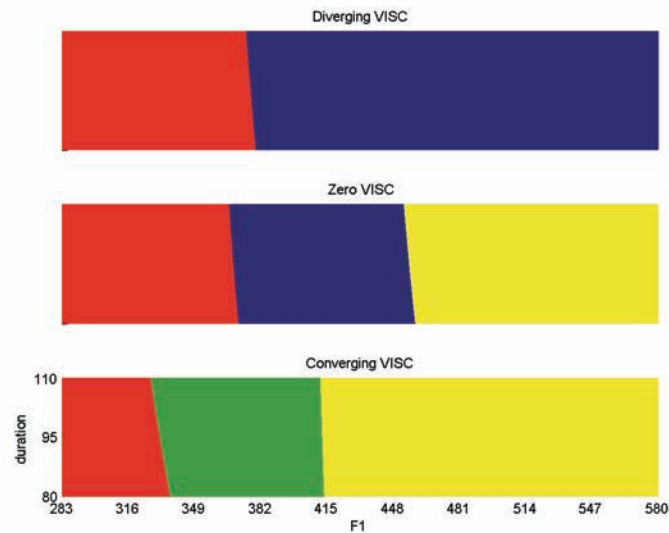


listener: bs078

Mexican

$G^2(255)$: 139

SAEP: 15%



English



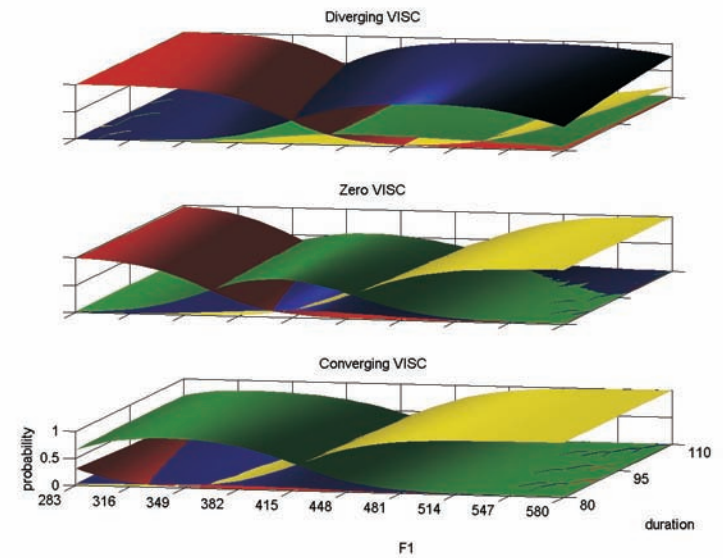
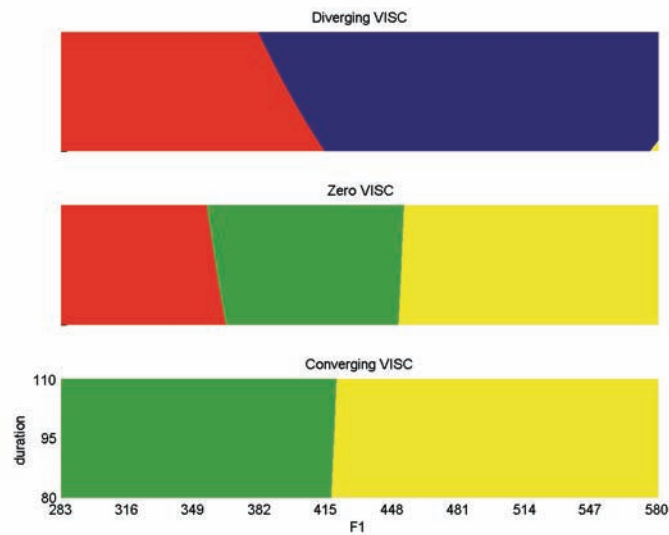
Hypothesised direct developmental path (first stage)

listener: bs059

Columbian

$G^2(255)$: 178

SAEP: 14%

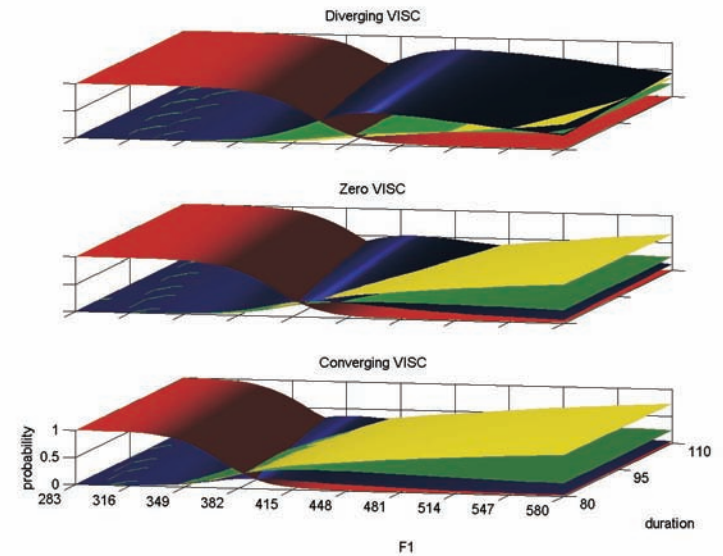
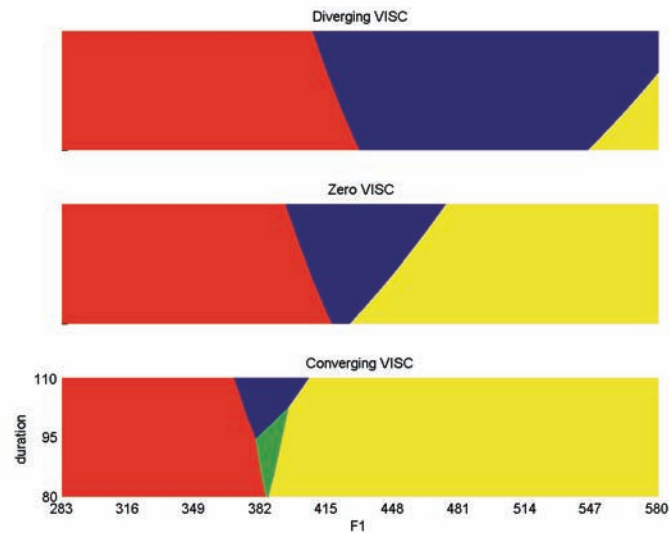


listener: bs017

Chilean

$G^2(255)$: 146

SAEP: 15%



English



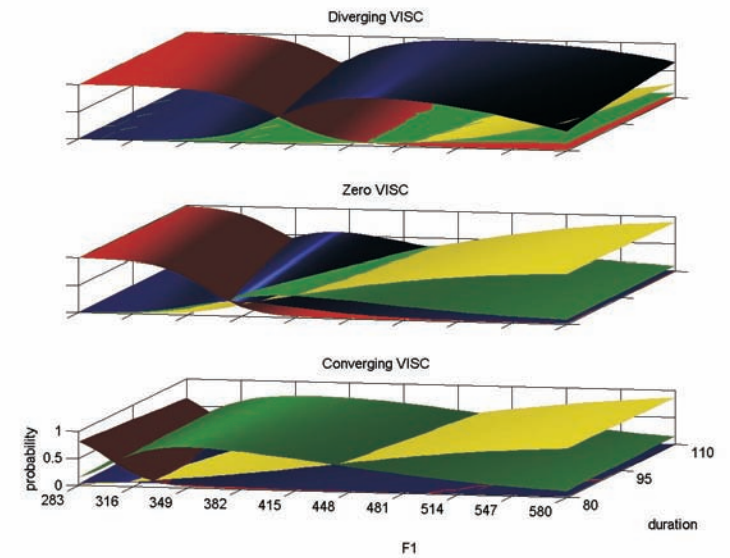
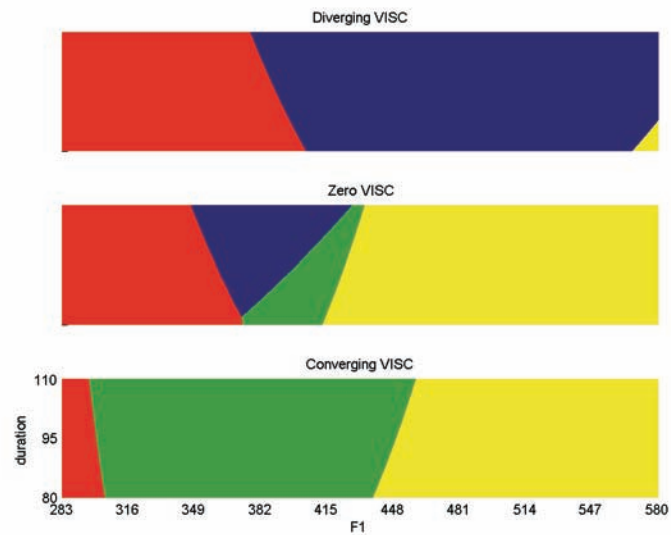
Hypothesised direct developmental path (first stage)

listener: bs063

Mexican

$G^2(255)$: 120

SAEP: 14%

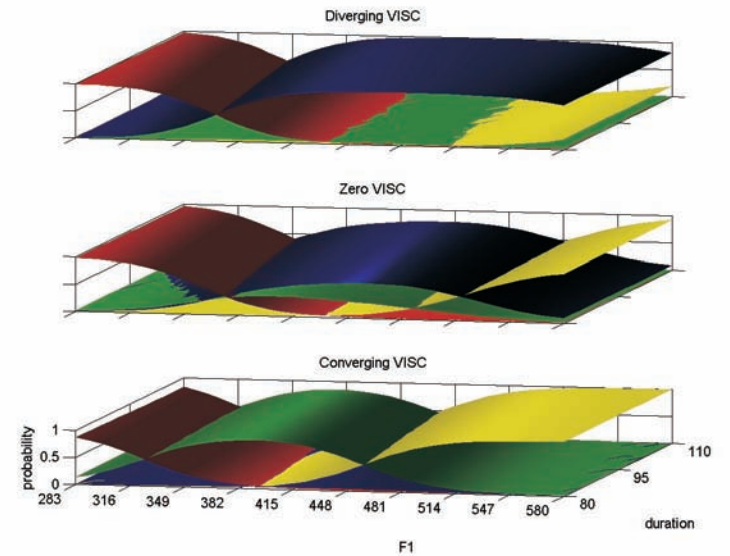
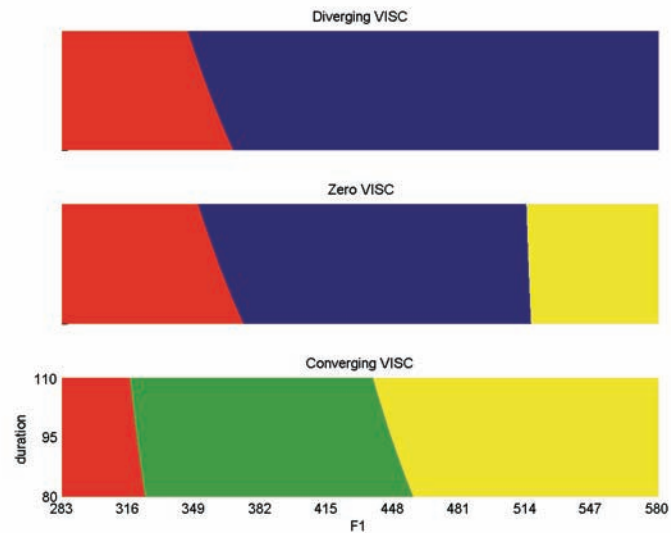


listener: bs086

Puerto Rican

$G^2(255)$: 111

SAEP: 13%



English

