

INDIRECT OBJECT ADVANCEMENT IN TZOTZIL REVISITED

Judith Aissen, in a very interesting paper (1978), proposed for Tzotzil all a set of Indirect Object Advancement (IOA), which involves initial 3's as 2's in transitive clauses. I would like to use this paper as a basis for alternative analysis, advanced along the lines of Comrie's proposals for Michol (Comrie (1979)). Under this analysis Tzotzil is considered to have a semantic pairing of nominal 3's with an initial syntactic category for which we will use Comrie's term, "prime object" (PO). Nominal 3's will also be assigned the relation of PO if there is no nominal 2 in the clause.

I hope to show that the analysis with PO (henceforth the Prime-Object Model (POM)) is superior to Aissen's model with IOA (the IOAM).

1. Basic facts about Tzotzil

Aissen presents the following facts about Tzotzil: It is a VOS language, with nominals unmarked for case, and with pronominal nominals frequently omitted. All verbs agree in person with their subject. All transitive verbs agree with their object (initial 2, under her analysis). The agreement system is morphologically irregular; one set of agreement affixes marks both initial subject and object, while another set marks only the subject or object; it either is both unmarked and plural marker may be placed on the verb. One set of absolutive, another set of absolutive, another set of absolutive. There is a pair of absolutive which are marked with a passive suffix, either -s or -ch.

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By David Tuggy

I would like to acknowledge my dependency on Aissen for virtually all I know about Tzotzil. Although this paper inevitably contains critical of her work, it would certainly have never been written without her insightful analysis to provide a starting point.

I will assume familiarity with the terminology of Relational Grammar (RG), both that used by Aissen and that used in such standard works as Perlmutter and Postal (to appear). In these terms a "1" is a nominal that bears the grammatical relation (GR) of Subject in its clause, a "2" has the GR of Direct Object, and a "3" bears the GR of Indirect Object. 1's, 2's and 3's are called "arguments". A nominal becomes a "prime object" when the GR is assigned by another nominal (e.g. 2 becomes 3 when 2 becomes 2). Initial arguments and final structures correspond closely enough, for our purposes, to the traditional deep and surface structures.

By "nominal 3's" I mean the nominals that by virtue of their position role would normally be assigned an initial GR of 3 under traditional RG. Similarly for "nominal 2's", "nominal 1's".

Although I will assume that this really is passive, Aissen's argumentation to support this hypothesis is inadequate. It could be 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-1229-1230-1231-1232-1233-1234-1235-1236-1237-1238-1239-1240-1241-1242-1243-1244-1245-1246-1247-1248-1249-1250-1251-1252-1253-1254-1255-1256-1257-1258-1259-1260-1261-1262-1263-1264-1265-1266-1267-1268-1269-1270-1271-1272-1273-1274-1275-1276-1277-1278-1279-1280-1281-1282-1283-1284-1285-1286-1287-1288-1289-1290-1291-1292-1293-1294-1295-1296-1297-1298-1299-1300-1301-1302-1303-1304-1305-1306-1307-1308-1309-1310-1311-1312-1313-1314-1315-1316-1317-1318-1319-1320-1321-1322-1323-1324-1325-1326-1327-1328-1329-1330-1331-1332-1333-1334-1335-1336-1337-1338-1339-1340-1341-1342-1343-1344-1345-1346-1347-1348-1349-1350-1351-1352-1353-1354-1355-1356-1357-1358-1359-1360-1361-1362-1363-1364-1365-1366-1367-1368-1369-1370-1371-1372-1373-1374-1375-1376-1377-1378-1379-1380-1381-1382-1383-1384-1385-1386-1387-1388-1389-1390-1391-1392-1393-1394-1395-1396-1397-1398-1399-1400-1401-1402-1403-1404-1405-1406-1407-1408-1409-1410-1411-1412-1413-1414-1415-1416-1417-1418-1419-1420-1421-1422-1423-1424-1425-1426-1427-1428-1429-1430-1431-1432-1433-1434-1435-1436-1437-1438-1439-1440-1441-1442-1443-1444-1445-1446-1447-1448-1449-1450-1451-1452-1453-1454-1455-1456-1457-1458-1459-1460-1461-1462-1463-1464-1465-1466-1467-1468-1469-1470-1471-1472-1473-1474-1475-1476-1477-1478-1479-1480-1481-1482-1483-1484-1485-1486-1487-1488-1489-1490-1491-1492-1493-1494-1495-1496-1497-1498-1499-1500-1501-1502-1503-1504-1505-1506-1507-1508-1509-1510-1511-1512-1513-1514-1515-1516-1517-1518-1519-1520-1521-1522-1523-1524-1525-1526-1527-1528-1529-1530-1531-1532-1533-1534-1535-1536-1537-1538-1539-1540-1541-1542-1543-1544-1545-1546-1547-1548-1549-1550-1551-1552-1553-1554-1555-1556-1557-1558-1559-1560-1561-1562-1563-1564-1565-1566-1567-1568-1569-1570-1571-1572-1573-1574-1575-1576-1577-1578-1579-1580-1581-1582-1583-1584-1585-1586-1587-1588-1589-1590-1591-1592-1593-1594-1595-1596-1597-1598-1599-1600-1601-1602-1603-1604-1605-1606-1607-1608-1609-1610-1611-1612-1613-1614-1615-1616-1617-1618-1619-1620-1621-1622-1623-1624-1625-1626-1627-1628-1629-1630-1631-1632-1633-1634-1635-1636-1637-1638-1639-1640-1641-1642-1643-1644-1645-1646-1647-1648-1649-1650-1651-1652-1653-1654-1655-1656-1657-1658-1659-1660-1661-1662-1663-1664-1665-1666-1667-1668-1669-1670-1671-1672-1673-1674-1675-1676-1677-1678-1679-1680-1681-1682-1683-1684-1685-1686-1687-1688-1689-1690-1691-1692-1693-1694-1695-1696-1697-1698-1699-1700-1701-1702-1703-1704-1705-1706-1707-1708-1709-1710-1711-1712-1713-1714-1715-1716-1717-1718-1719-1720-1721-1722-1723-1724-1725-1726-1727-1728-1729-1730-1731-1732-1733-1734-1735-1736-1737-1738-1739-1740-1741-1742-1743-1744-1745-1746-1747-1748-1749-1750-1751-1752-1753-1754-1755-1756-1757-1758-1759-1760-1761-1762-1763-1764-1765-1766-1767-1768-1769-1770-1771-1772-1773-1774-1775-1776-1777-1778-1779-1780-1781-1782-1783-1784-1785-1786-1787-1788-1789-1790-1791-1792-1793-1794-1795-1796-1797-1798-1799-1800-1801-1802-1803-1804-1805-1806-1807-1808-1809-1810-1811-1812-1813-1814-1815-1816-1817-1818-1819-1820-1821-1822-1823-1824-1825-1826-1827-1828-1829-1830-1831-1832-1833-1834-1835-1836-1837-1838-1839-1840-1841-1842-1843-1844-1845-1846-1847-1848-1849-1850-1851-1852-1853-1854-1855-1856-1857-1858-1859-1860-1861-1862-1863-1864-1865-1866-1867-1868-1869-1870-1871-1872-1873-1874-1875-1876-1877-1878-1879-1880-1881-1882-1883-1884-1885-1886-1887-1888-1889-1890-1891-1892-1893-1894-1895-1896-1897-1898-1899-1900-1901-1902-1903-1904-1905-1906-1907-1908-1909-1910-1911-1912-1913-1914-1915-1916-1917-1918-1919-1920-1921-1922-1923-1924-1925-1926-1927-1928-1929-1930-1931-1932-1933-1934-1935-1936-1937-1938-1939-1940-1941-1942-1943-1944-1945-1946-1947-1948-1949-1950-1951-1952-1953-1954-1955-1956-1957-1958-1959-1960-1961-1962-1963-1964-1965-1966-1967-1968-1969-1970-1971-1972-1973-1974-1975-1976-1977-1978-1979-1980-1981-1982-1983-1984-1985-1986-1987-1988-1989-1990-1991-1992-1993-1994-1995-1996-1997-1998-1999-2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-2438-2439-2440-2441-2442-2443-2444-2445-2446-2447-2448-2449-2450-2451-2452-2453-2454-2455-2456-2457-2458-2459-2460-2461-2462-2463-2464-2465-2466-2467-2468-2469-2470-2471-2472-2473-2474-2475-2476-24

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Judith Aissen, in a very interesting paper (1978), proposes for Tzotzil a rule of Indirect Object Advancement (IOA), which converts initial 3's to 2's in transitive clauses.^{1,2} I would like in this paper to present an alternative analysis, conceived along the lines of Comrie's proposals for Huichol (Comrie (1979)). Under this analysis Tzotzil is considered to have a semantic pairing of notional 3's with an initial syntactic category for which we will use Comrie's term, "prime object" (PO).³ Notional 2's will also be assigned the relation of PO if there is no notional 3 in the clause.

I hope to show that the analysis with PO (henceforth the Prime-Object Model (POM)) is superior to Aissen's model with IOA (the IOAM).

1. Basic facts about Tzotzil

Aissen presents the following facts about Tzotzil: It is a VOS language, with nominals unmarked for case, and with pronominal nominals frequently omitted. All verbs agree in person with their subject. All transitive verbs agree with their object (final 2, under her analysis.) The agreement system is morphologically ergative; one set of agreement affixes marks both intransitive subjects and transitive objects, and a different set marks transitive subjects. Verbs optionally agree in number with the subject or object; if either is both animate and plural a plural marker may be placed on the verb. One set of such prefixes corresponds to ergative nominals, another to absolutes. There is a rule of Passive which converts objects of transitive sentences to subjects. Passivized verbs are marked with a passive suffix, either -e or -at.

¹I would like to acknowledge my dependency on Aissen for virtually all I know about Tzotzil. Although this paper inevitably sounds critical of her work, it would certainly have never been written without her insightful analysis to provide a starting point.

²I will assume familiarity with the terminology of Relational Grammar (RG), both that used by Aissen and that used in such standard works as Perlmutter and Postal (to appear). In these terms a '1' is a nominal that bears the grammatical relation (GR) of Subject in its clause, a '2' has the GR of Direct Object, and a '3' bears the GR of Indirect Object. 1's, 2's and 3's are called "terms". A nominal becomes a "chômeur" when its GR is assumed by another nominal (e.g. 2 becomes $\hat{2}$ when 3 becomes 2). Initial structures and final structures correspond closely enough, for our purposes, to the traditional deep and surface structures.

³By "notional 3's" I mean the nominals that by virtue of their semantic role would normally be assigned an initial GR of 3 under traditional RG. Similarly for "notional 2", "notional 1."

⁴Although I will assume that this really is Passive, Aissen's argumentation to support this hypothesis is inadequate. It could be 1-Demotion. Of the three pieces of evidence that Aissen gives to show that the initial 2 is a final 1, the first two (person and number agreement) are properties that 1's and 2's share. (Both the 2 and the 1 produced by passive are ab-

In ditransitive sentences (those with both a notional 2 and a notional 3), where Aissen claims that IOA applies, the notional 3 exhibits the same characteristics as the notional 2's of simple transitive sentences. The verb agrees with it in person, and may agree with it in number, and it may advance to subject by Passive. These verbs are marked with the suffix -be.

In causative clauses where Clause Union has occurred, the nominal that was initially the subject of the downstairs clause exhibits the same characteristics in the upstairs clause as notional 2's do in transitive clauses or notional 3's in ditransitives. The downstairs object does not.

There is a derivational verbal suffix -van, which derives intransitive stems from transitive ones. "Verbs suffixed with -van have a reading like 'to do x to y, or with respect to y', where y must be human, either a non-specific human or a discourse referent" (Aissen p. 20). Verbs with -van never have an overt object, nor do they allow the suffix -be. Also, verbs from causative Clause Union cannot be suffixed with -van.

Certain verbs which are always intransitive never have the suffix -be used with them. Passive verbs may have the suffix -be preceding the Passive marker, in which cases the notional 3 of a ditransitive sentence is the subject, but they may not have -be following the Passive marker, nor may they have the notional 2 of a ditransitive sentence as subject.

2. The two models contrasted

In this section I would like to contrast the ways Aissen's IOAM and a POM would account for the above data. I will use the term numbers 1,2,3 in statements attributed to the IOAM, and the term abbreviations 1,PO,SO (Subject, Prime Object, Secondary Object) for those attributed to the POM. In contrasting statements I will capitalize those parts which seem to constitute important differences between the two models.

A. Why notional 3's are final 2's of ditransitive sentences

IOAM: 3's advance to 2's by a SYNTACTIC RULE of IOA.

POM: Notional 3's are chosen in preference to 2's to bear the PO GR. Notional 2's that do not bear the PO GR bear the SO GR. This is a SEMANTICO-SYNTACTIC RULE.

B. Why notional 2's are not final direct objects of ditransitives

IOAM: Stratal uniqueness law (+ Chomeur law).

POM: Stratal uniqueness law (at initial stratum).

C. Person Agreement

IOAM: Verbs agree in person with final 1 and final 2.

POM: Verbs agree in person with final 1 and final PO.

D. Number Agreement

IOAM: Verbs may agree in number with either final 1 or final 2.

solutives.) The third fact follows naturally from 1-Demotion: if there is no subject in a VOS language, the O is in last position.

POM: Verbs may agree in number with either final 1 or final PO.

E. Passive

IOAM: 2 advances to 1.

POM: PO advances to 1.

F. Meaning of -be

IOAM: Marks IOA.

POM: Registers presence of a SO in the clause.

G. Word Order

IOAM: V 2̂ 2 1 (imposed at surface)

POM: V SO PO 1 (imposed at surface)

H. Causative constructions with Clause Union

IOAM: Downstairs Erg (D-Erg) becomes upstairs 3 (U-3), D-Abs becomes U-2.
(THIS HAS BEEN CLAIMED AS A UNIVERSAL.)

POM: D-1 becomes U-PO, D-PO becomes U-SO. (THIS IS NOT NECESSARILY UNIVERSAL.)

I. Why -be is used on some causative sentences

IOAM: Because IOA has applied, turning a derived 3 into a 2.

POM: Because there is a SO in the clause.

J. -van Formation

IOAM: A rule operating on initial structure eliminates certain human 2's, leaving -van behind as a marker. AMONG THOSE 2'S ARE NOTIONAL 3'S.

POM: A rule operating on initial structure eliminates certain human PO's, leaving -van behind as a marker.

K. Why there are no verbs with both -be and -van

IOAM: IOA OCCURS ONLY IN TRANSITIVE CLAUSES.

POM: -van FORMATION DOES NOT OCCUR IN DITRANSITIVE CLAUSES.

L. Why there are no intransitive verbs with -be

IOAM: Because IOA occurs in transitive clauses only.

POM: Because -be occurs only in ditransitive clauses; no intransitive verb could be lexically inserted in such a clause.

M. Why there are no cases of IOA after Passive

IOAM: Because IOA only occurs in transitive clauses.

POM: Because there is no rule of IOA to apply.

N. Why there are no final 3's

IOAM: A SPECIAL CONSTRAINT IS REQUIRED. The No-3 Constraint, which is either a derivational or a surface structure constraint, stars sentences with final 3's in them.

POM: There never were any 3's at all. There is nothing to explain.

O. Why notional 2's of ditransitives never suffer Passive

IOAM: If they do, they leave a 3 which cannot undergo IOA, since IOA only occurs in transitive clauses. The No-3 Constraint stars such sentences.

POM: They are not PO's.

3. Discussion of differences in the two models

As far as I know, both models account for the data. Externally, the IOAM can call for support from proposed universals concerning the nature of initial GR's in the languages of the world. Yet the POM can also point to a number of languages where a system such as it has apparently will work well; e.g. Huichol, Cora, and Aztec. And, internally, if it accounts for the data better than the IOAM, or even as well, it would have the support of Comrie, since it would "prevent the establishment of a grammatical relation in one language simply because some other language shows a difference in grammatical relation in the relevant place." (I expect John of Ockham would approve too.)

The IOAM can also appeal to proposed universals concerning the derived GR's of nominals in Clause Union constructions. (This, of course, is obviously dependent on the proposed universals concerning initial GR's.) However, it would not at all be surprising to find that the patterns produced under the POM are also universal for language systems which operate under that system of GR's. Apparently such patterns hold for Aztec and Cora at least.

In section J of part 2 it was noticed that under the IOAM the rule of -van Formation apparently has to include notional 3's among the 2's to which it applies. This observation was made on the strength of Aissen's comment that some verbs with -van are paraphrased 'do x with respect to y'. My understanding is that the semantic relationship expressed by 'with respect to' would fall under the notional 3 category rather than under the notional 2 category. Yet Aissen claims that nominals bearing that relationship are 2's, and thus can undergo -van Formation. In other words, the IOAM is also abandoning the direct pairing of notional 1,2, and 3 with syntactic 1,2, and 3. This destroys any advantage it might have had over the POM in terms of obeying universal semantico-syntactic linking conventions. To use the same fact in a language internal argument, the IOAM has two mechanisms for linking notional 3's with syntactic 2's. One is the syntactic mechanism of IOA, and the other is the semantico-syntactic rule needed to make nominals with the semantic relationship 'with respect to' into 2's. (Let us call this rule 3-2 Linking.) The POM, on the other hand, needs only one mechanism, the semantico-syntactic mechanism that links notional 2's with PO's. I suspect that this phenomenon is more widespread than Aissen's data indicate; I would be surprised not to find that there are many verbs in Tzotzil that take a notional 1 and a notional 3 but no notional 2, but which under Aissen's analysis would be simple transitive sentences, since there is no -be to mark the application of IOA. These sentences would also need the extra rule of 3-2 Linking.

Language internally, the following observations can be made about the differences concerning the two models as compared in section 2. Each seems to handle equally well the questions in sections A-I. The argument given in the last paragraph holds with respect to the difference noted in section J. Section K is interesting in that both analyses have some sort of requirement that a rule apply differently according to the transitivity or ditransitivity of a clause. But they differ as to which rule is constrained by that requirement. The IOAM puts the restriction on IOA, but

the POM puts it on the rule of -van Formation. Sections L and M, though handled quite differently, are handled by both models without further machinery. However, in section N, the IOAM is forced to propose the ad hoc No-3 Constraint to get rid of all sentences that have 3's that haven't been gotten rid of by IOA and 3-2 Linking. For the POM, however, there is nothing to explain; there never were any 3's. Section O follows under both models without further complication.

In sum, then, I claim that although the POM violates some proposed universal constraints and does not take advantage of others, as the IOAM does, it is clearly superior to the IOAM on language internal grounds, in that it has only one mechanism making sure that all notional 3's are linked with syntactic 2's (i.e. PO's), whereas the IOAM has 3: the rule of IOA, the rule of 3-2 Linking, and the No-3 Constraint. In addition, by needing 3-2 Linking, the IOAM itself would appear to be violating proposed universal semantic-syntactic linkings. I thus conclude that the POM is to be preferred over Aissen's IOAM.

Further Discussion

It is not the case that I have proven that the POM is the best model to account for the facts of Tzotzil. Other models are possible. One such possibility would be to, instead of proposing new GR's of PO and SO, define them in terms of the GR's 2 and 3, much as the GR's Erg and Abs are defined in terms of 1 and 2. This model could preserve the universal characterization of initial GR's and could utilize the universal proposals concerning Clause Union. But it would predict that Passivized ditransitive clauses would be transitive, since, once the 3 (the PO) had been made into the subject by Passive, the 2 would remain and would be automatically converted into the PO. This unpleasant result could be avoided if we were to claim that Passive is really Subject Demotion of some sort. In most other respects this model would parallel the POM.

Another possible model would be one like the IOAM, but which made IOA obligatory and not restricted to transitive clauses. This would abolish the need for 3-2 Linking and the No-3 Constraint. -be would be analyzed as marker of the presence of a 2, and -van Formation would be constrained not to apply in ditransitive clauses. Again, the universal characterization of initial GR's would be saved, and the characterization of Clause Union GR's would be usable. However, this model would predict that 2's in ditransitive clauses could be converted into subjects by Passive before IOA applied, leaving us again with transitive Passivized sentences, this time with the notional 2 as subject. In other words, this model would have trouble accounting for the data considered in sections M and O. Again, this problem could be avoided by proposing that Passive is really Subject Demotion. Or it could be avoided by proposing some sort of constraint like an ordering constraint, simply stating adhocly that Passive cannot apply to structures that IOA can apply to. In many other respects this model would parallel the IOAM.

I consider either of these two models to be superior to the IOAM as proposed by Aissen. The first one has going for it the fact that it does not posit IOA, which here is a rule of absolute neutralization. However, it must abandon the universal characterizations of Passive and transitivity, since it claims Passive advances PO's instead of 2's to be

subjects, and would define a transitive clause as one that has a 1 and a PO. The POM would seem at first to suffer from the same defect, but it need not. I would, in fact, propose, as Comrie does for Huichol, that PO = 2.⁵ The difference between the initial GR inventory of languages like Tzotzil and those that have 1, 2, and 3 would be that the languages like Tzotzil would have a SO but no 3.⁶ Thus all generalizations that have to do with 3's would not apply to them, but those that have to do with 2's would.

Both of these models (the one with defined PO and the one with obligatory unrestricted IOA) involve positing a grammatical relation for Tzotzil, namely 3, which is not really required by language internal considerations. Also, unless the assumption is correct that Passive is really Subject Demotion, both models need extra machinery that is not needed by the POM.

I conclude that there are at least three models that are superior to Aissen's IOAM. There is some reason for preferring the POM among those three. Further data should be sought in Tzotzil to make possible a clear choice among them, and other languages with similar grammatical patterns should be examined with these alternatives in mind.

Bibliography

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- Comrie, B. (1979) "Grammatical Relations and Coreference in Huichol" (unpublished MS)
- Perlmutter, D. and P. Postal (to appear) Relational Grammar

⁵Comrie's idea is apropos that: "the identification of grammatical relations across languages...would presumably be on the basis of shared properties of sets of noun phrases across languages." (p.16)

⁶It seems to me likely that Tzotzil-like systems can arise historically from 1,2,3 systems simply by a rule of 3-2 advancement becoming obligatory and unrestricted (i.e. causing absolute neutralization.) I would claim that at that point it ceases to be a syntactic rule, with a resultant change in the underlying GR's. This makes different empirical predictions from the model that keeps it as a syntactic rule: it would predict that there will be no human language with an obligatory and unrestricted rule of IOA and a syntactic rule of Passive which would permit the notional 2 of a ditransitive clause to suffer Passive. I.e. IOA would always be "ordered" before Passive.