History of HPSG

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I. Precursors
   a. Syntactic Theory ca. 1980 - Questioning the role of transformations: Montague Grammar & Categorial Grammar (Bach, Dowty, Steedman), Bresnan's "realistic TG",
   b. Gazdar's papers, the birth of GPSG
   c. Growing concern with mathematical properties and computational implementation; Pullum & Gazdar's refutation of arguments that NLs are not CF; Uszkoreit & Peters theorem about metarules; Shieber on Swiss German; Birth of LFG; PATR-II; Kay's Functional Unification Grammar

II. The HP NLP project
   a. Sag's course on GPSG & Egon Loebner's offer to him
   b. Early participants: Sag, Pullum, Wasow, Gawron, Paulson, Lamping, King
   c. Students hired part-time: Pollard, Flickinger, Proudian
   d. Others who worked on the project: Friedman, Kessler, Brennan, Nerbonne, Laubsch, Creary, Goddeau

III. Evolution from GPSG to HPSG
   a. Pollard's development of Head Grammar, combining ideas from GPSG and CG
   b. Pollard & Sag 1983 (WCCFL 2): nonconcatenative operations, foot features
   c. major revisions to the HP-NLP system by Pollard and Paulson during summer of 1983 (while other project members were at LSA), dubbed "HPSG" by Pullum
   d. Pollard 1984 (dissertation): deterministic polynomial time complexity of head grammars
   e. Pollard 1985a (WCCFL 4): elimination of metarules from PSG; and 1985b (publ. 1988) Tuscon paper on CG and PSG
   f. GKPS book 1985
   g. Implementational reasons to put more info in lexicon than rules
   h. Request from supervisors at HP to incorporate HPRL, an in-house implementation of a hierarchical knowledge representation system with inheritance
   i. the three 1985 ACL papers

IV. Early HPSG
   a. Kasper & Rounds (1986) and Moshier (1987) work on feature logic
   b. Pollard & Sag 1987: feature theory, subcategorization, rules, constituent order, lexical hierarchy
   c. Paul King's dissertation and the change of formal foundations from unification to total well-typing
   d. Pollard & Sag 1994: feature theory redux, agreement, complementation, obliquess and the Keenan-Comrie accessibility hierarchy, unbounded dependencies, binding theory, control, quantifier scope, subjects and specifiers a' la Borsley

    e. the HPSG Verbmobil grammar of German at IBM Heidelberg

V. The LinGO Project
    a. Verbmobil contract for Sag through CSLI
    b. Flickinger moves from HP to Stanford
    c. Important early contributions to implementation from Malouf, DFKI
    d. Development of LinGO over the years

VI. Theoretical Developments in HPSG
    a. Annual Conferences
    b. Reape's ideas on word order and Kathol's take on order domains
    c. MRS
    d. Other academic departments featuring HPSG in 1980s-90s: OSU, Paris, Saarbruecken, Tübingen, Leuven, Groningen, Tokyo/Osaka. Seoul
    e. More recent centers of HPSG research & teaching: Seattle, Buffalo, Berlin, Düsseldorf
    f. Languages of early interest: French, German, Dutch, Japanese, Korean

VII. Implementations and Applications of HPSG Around the World
    a. ERG, DFKI's German & Japanese, Trondheim's Norwegian, Marimon's Spanish;
    b. smaller but serious grammars of Korean, Portuguese, Bulgarian, Mandarin,
    c. Matrix generalization
    d. DELPH-IN consortium
    e. Carpenter/Penn's ALE/TRALE implementation platform and grammars
    f. Commercial apps: DFKI, YY, NTT, EPGY/Redbird/McGraw-Hill

VIII. A Spin-off: SBCG