

BR1 case appendix

Human archival records: iPSCs-11 and GIAM-27

Companion to *Behavioral variation and donor history in the follow-up of somatic cell nuclear transfer*

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Fictional document. The clinical histories, observations and institutional records described here are constructed story material.

Scope of the case records

These accounts expand the two human cases retained in BR1. The telephone observation prompted the archival review; the speech case was retained during the subsequent examination of eligible files. Six human recipients had attained sufficient sustained responsiveness for structured assessment, and five had audiovisual and donor records adequate for comparison. The reporting criteria were established after the telephone observation. The remaining eligible files were reviewed for recurring behavior, a donor counterpart recorded before source-cell collection and available exposure information. Unequal recording opportunities and incomplete exposure histories prevent use of the two retained cases as an estimate of prevalence.

Case A. iPSCs-11: an additional receiver replacement and lift

A1. Program origin and functional status

iPSCs-11 originated in a separate human somatic cell nuclear transfer (SCNT) program directed by George J. Donnelly, PhD. The program concerned viability, graft development, neurological organization and sustained responsiveness; it had no behavioral-inheritance objective. Donnelly died in an unrelated laboratory accident before its planned completion. The program remained administratively active for a limited period before discontinuation, while iPSCs-11 remained at the facility under the existing custodial and clinical-care provisions. Routine developmental observation continued.

The registered birth was in June 1993. The index sessions in September 2018 therefore concerned an existing adult recipient. The legacy iPSCs prefix did not denote induced pluripotent stem cells, and its numerical suffix was an archive identifier rather than a count of viable births.

At the time of the sessions, iPSCs-11 showed spontaneous eye opening, recognizable sleep and wake cycling, visual pursuit, localization of objects within reach and reproducible object-directed reaching. The subject occasionally copied a single demonstrated action. Responses to spoken commands were inconsistent, and a small repertoire of stereotyped utterances did not support sustained generative conversation. The originating program had not used a validated consciousness-assessment protocol, so these observations do not justify a more precise retrospective diagnostic classification.

A2. Observation and documentation order

Occupational therapist Marion E. Keller observed an object-familiarization session from the adjacent monitoring area during routine work. She knew that iPSCs-11 had been produced through SCNT but had no access to the nuclear donor's identity, occupation or telephone history. The session had been arranged for routine care. Keller requested preservation of the complete recording after noticing an additional receiver replacement and immediate second lift that the examiner had not demonstrated.

The action was entered into the session record in four components: an initial lift, complete replacement on the cradle, immediate second lift and placement beside the head. An archive officer countersigned the entry before donor-provenance access was authorized. Two additional reviewers, also without access to the donor file, examined the complete recorded interactions and confirmed the order. Their review used the full interactions,

rather than a selected clip. Lambrecht contributed to the later interpretation; he had relinquished routine program coordination in 2003 and was not the observer.

This order of documentation limits the possibility that knowledge of the donor's behavior shaped the initial description. The case nevertheless began with a conspicuous observation by someone who knew the subject's SCNT origin. It was an index observation followed by archival investigation, not a positive result from a prospectively defined human screen.

A3. Instrument, demonstration and repeated contacts

The disconnected corded desk telephone was presented among several common manufactured objects. Its ringer and network connection were disabled. Before the first contact, the examiner lifted the receiver, held it briefly beside the head and replaced it once. No second lift was performed or requested. The recording contained no intervening verbal or visual prompt between the subject's replacement and second lift.

Inspection after the sessions found normal movement of the receiver, cradle, hook switch and cord. A single lift removed the receiver from the cradle, and the extra replacement and lift served no operational purpose on the disconnected instrument. Ear laterality was excluded from the primary comparison because posture, handedness, table arrangement, mirrored imitation or a developmental lateral preference could account for it.

Across three sessions over eleven days, iPSCs-11 initiated six contacts with the telephone. The complete sequence occurred during the first contact and four of the five later contacts. On the remaining occasion, the receiver was lifted once and brought beside the head. There was no dialing, number selection, waiting for a response, appropriate telephone speech or other functional telephone use. When asked about the action, the subject responded "I don't know." The same utterance occurred in unrelated care exchanges and supplies no reliable account of the sequence's origin. The sessions did not establish understanding of the telephone's communicative function.

Other records showed repetitive turning and tapping of objects. We found no other documented object interaction with the same combination of a full reset, one immediate repetition and progression to another stage of handling. That qualitative distinction helped define the action for comparison, but the archive did not contain uniform comparison opportunities from which to estimate its specificity. Perseveration remained a material alternative.

A4. Donor history and source-cell chronology

Donor provenance was released after the recipient sequence had been recorded, countersigned and independently confirmed. The comparison used three complete workplace ergonomics recordings from August 1991, November 1991 and January 1992, retained with a dispatch-desk assessment. Six sampled hours supplied twenty-five interactions in which receiver handling remained visible through placement beside the head. Every usable interaction in those recordings was counted.

The donor performed no additional replacement and lift in five usable interactions before the reported equipment fault. During the fault period, the sequence occurred in ten of twelve interactions. A contemporary maintenance entry described an intermittent hook-switch failure and stated that reseating the receiver could restore the connection; it did not describe the donor's movement. The instrument was replaced later in November 1991, and the additional replacement and lift persisted in six of eight usable interactions afterward. The donor then brought the receiver to the left ear, although that laterality was not counted as independent evidence of correspondence.

Record stage	Observed sequence or chronological relation
Before reported hook-switch fault	0 of 5 usable donor interactions contained the double-lift sequence.
During reported fault	10 of 12 usable donor interactions contained the sequence.
After replacement of the faulty instrument	6 of 8 usable donor interactions contained the sequence.
Source-cell collection	Occurred after the post-replacement donor recordings.
First subject contact	iPSCs-11 performed the complete sequence before donor provenance was released.
Later subject contacts	The complete sequence occurred on 4 of 5 additional contacts.

Source cells were collected in March 1992, after the post-replacement recordings. The workplace and care-unit telephones were different models, and the recipient's instrument had no corresponding fault. The comparison therefore concerns an action order with a plausible earlier practical use in the donor's workplace. The chronology places its recorded appearance and persistence before source collection, but does not prove that the equipment fault caused its acquisition.

The workplace footage was collected for ordinary documentation. Its timing, camera position and survival were not governed by a behavioral sampling protocol. The frequencies describe the surviving interactions, rather than the donor's telephone use generally. I consider this chronology more informative than visual resemblance alone, while recognizing that acquisition was reconstructed retrospectively.

A5. Exposure review and interpretation

No corded telephone appeared in the surviving residential inventory, previous training materials or earlier recorded object-familiarization sessions. The retained demonstrations showed a single lift and replacement. Donor workplace footage was held in a restricted provenance archive and was not listed among material accessible to the care unit. Direct-care personnel reported no knowledge of the donor's telephone behavior and had no ordinary access to occupational records.

Some senior personnel could access both clinical and provenance material. Residential rooms lacked continuous audio recording, background media were logged during scheduled sessions rather than throughout care, and informal staff exchanges could not be reconstructed. These gaps leave indirect demonstration or other relevant exposure possible despite the absence of a documented route. Partial imitation of the examiner, repetitive handling, an individual preference and chance repetition also remain plausible explanations.

iPSCs-11 is retained as a candidate donor-concordant procedural pattern. It is the stronger of the two human comparisons because the proposed correspondence is a short ordered action, repeated across contacts, documented before donor review and linked to an equipment history preceding source collection. The subject's broader repetitive behavior and the incomplete care history prevent a causal attribution. The record supports prospective testing of that defined sequence; it does not establish transferred telephone knowledge, episodic memory, communicative intention or personal identity.

Case B. GIAM-27: a regional pronunciation pattern in English

B1. Registry and developmental history

GIAM-27 was the only additional human record retained after the iPSCs-11 observation prompted review of the remaining eligible archive. The GIAM registry included source-cell lines, developmental attempts, failed pregnancies, live births and subjects who never attained sufficient responsiveness for structured assessment. Identifiers remained assigned after failed development or death, so GIAM-27 did not denote twenty-seven viable predecessors.

Most live-born subjects in that series retained spontaneous respiration, brainstem-mediated reflexes, periods of eye opening and recognizable sleep and wake cycles without developing reproducible behavioral evidence of awareness. The clinical records distinguished these surviving subjects from the smaller group subsequently declared dead after loss of brainstem function during deterioration. GIAM-27 was among the uncommon subjects who developed sustained interaction with their surroundings.

Born in February 1994, GIAM-27 visually followed people and objects, recognized regular caregivers, used familiar objects as demonstrated and participated in short conversations. At the most developed stage recorded, she could name objects and personnel, request food or assistance, answer concrete questions about visible events and sustain several conversational turns. Responses were less reliable for distant events, hypothetical situations and abstract categories. Accelerated somatic maturation accompanied markedly uneven neurological development, making ordinary age-based comparisons inadequate.

Progressive metabolic instability, impaired motor control and declining respiratory function preceded her death in August 1995, at eighteen months. Deterioration prevented further linguistic testing, assessment after stabilization and detailed biomechanical imaging of the vocal tract. English was the only language used in her documented instructional and residential programs.

B2. Recognition and available speech material

Three routine clinical notes commented on GIAM-27's pronunciation before the present review and before the examiners had access to donor provenance. One described a German or possibly Dutch sound; another referred to a consistent continental European accent. These observations prompted examination of the speech record within the later criterion-based archive review.

Eleven audiovisual sessions across fourteen weeks between March and June 1995 contained approximately forty-three minutes of intelligible English. Seven were structured developmental assessments and four were routine clinical interviews. Object naming, descriptions of visible events, requests and exchanges about immediate care supplied both elicited and spontaneous speech. The retained material contained no German lessons, instructions or deliberate accent exercises, and demonstrated no German vocabulary, grammar or comprehension.

B3. Recorded exchange and phonetic illustrations

The following exchange occurred in the earliest surviving session in which GIAM-27 sustained more than two conversational turns. A cup had tipped after a meal tray was moved. The exchange remained in the original continuous recording.

Examiner: “What happened to the cup?”

GIAM-27: “The tray moved and it fell.”

Examiner: “Did you knock it over?”

GIAM-27: “No. I did not touch it.”

Examiner: “Why do you sound German when you talk?”

GIAM-27: “What is German?”

Examiner: “Never mind. Where did the water go?”

GIAM-27: “On the blanket. I put the blanket down.”

Examiner: “Why did you put it there?”

GIAM-27: “It was wet. I did not want it on the bed.”

The examiner’s pronunciation question was spontaneous and formed no part of a linguistic assessment or planned exposure interview. GIAM-27 distinguished her own action from movement of the tray, identified where the water had fallen and gave an immediate reason for moving the blanket. Her responses were contextually appropriate and did not repeat an auditory model supplied in the exchange. Her question about the word German cannot establish absence of earlier exposure: an unfamiliar language or accent may be heard without its geographical label being known, and her capacity to report past experience was limited.

The transcript uses ordinary English spelling. In the audio, “The tray moved and it fell” was rendered approximately as:

[də tʁeɪ mu:ft ɛnt ɪt fɛl]

“It was wet” was rendered approximately as:

[ɪt vɜs vɛt]

These illustrations use the International Phonetic Alphabet (IPA). They show examples of the posterior rhotic, final devoicing and realization of English /w/ near [v] described in the wider record. They are approximate transcriptions of two utterances, not a complete phonetic inventory. The broad pattern occurred with different examiners and in elicited and spontaneous speech. Its intensity varied with fatigue and respiratory stability without consistently converging on the regular caregivers’ accents.

B4. Coded phonetic review

Two reviewers experienced in German regional phonetics received the complete usable speech set under coded identifiers. They were given neither the subject's name, registry series or SCNT history nor the donor's identity, birthplace or the hypothesis under investigation. Their task was to describe pronunciation, assess possible language influence and offer regional alternatives where supported. Initial classifications were completed independently and signed before donor provenance was released. The complete recording included the examiner's reference to a German accent, so masking withheld donor provenance but not every prior clinical attribution of language influence.

Both described English under a strong German phonological influence and considered Dutch a poorer description of the complete material. The reported features included stopping of English interdental fricatives, initial /w/ near [v], devoicing of several word-final obstruents, posterior rhotics, vowel placements outside those of the recorded English-speaking examiners, and timing and pitch movement compatible with German-influenced connected speech. Each feature can occur in other languages, dialects, developmental patterns or motor disorders; the reviewers based their regional descriptions on their combined distribution.

One reviewer favored West Central German, ranking the western Palatinate first. The other described a Rhine Franconian pattern with Palatine and Saarland varieties as the principal alternatives. Neither identified a town, institution, family or individual speaker. These qualitative descriptions and the two illustrative transcriptions do not supply a systematic feature-by-token inventory, acoustic measurements or a measure of interreviewer reliability.

B5. Donor provenance and comparison

The donor was a woman raised near Kaiserslautern in the western Palatinate. West Palatine German was her first spoken variety; Standard German was acquired through schooling and English later. Administrative and clinical recordings showed fluent English with a persistent Palatine-influenced accent, including posterior rhotics, final obstruent devoicing, several vowel placements described in GIAM-27 and comparable pitch movement across declarative phrases. These recordings differed in microphone quality, subject matter, emotional context and speaking situation and had not been collected for linguistic analysis.

After the initial recipient classifications had been locked, the reviewers received coded donor clips mixed with English recordings from unrelated German speakers. Both placed the donor and GIAM-27 in the same broad Rhine Franconian grouping and ranked the donor recording as the closest regional comparison. The second reviewer cautioned that recording quality and GIAM-27's abnormal vocal development prevented a speaker-level comparison. Pitch, vocal-tract maturity, respiratory control, speaking rate and voice quality differed substantially between the two speakers. The comparison concerned pronunciation and prosody rather than vocal identity.

Source cells were collected after the donor's acquisition of English and after the regional influence appeared in the available donor recordings. GIAM-27 reproduced no donor vocabulary, Palatine expressions, German syntax or recording content. The comparison therefore provides no evidence of access to the donor's linguistic knowledge or autobiographical experience.

B6. Exposure, anatomy and limits of interpretation

GIAM-27 spent her postnatal life in BioDome clinical and residential facilities. The documented care, instruction, assessments and retained media used English. No German lesson, recording, broadcast or deliberate pronunciation demonstration was identified. Donor recordings remained in the restricted provenance archive, were not listed as released to the clinical unit and had no recorded playback in residential or assessment areas. The examiners who first noted the accent had no access to donor identity or birthplace.

Personnel rosters and interviews identified no Palatinate-raised member of the regular care team. Regular caregivers denied speaking German to GIAM-27 or playing German material in her presence; personnel with provenance access did not provide routine language instruction or developmental assessment. Continuous residential audio was not maintained, and informal staff conversations were not preserved. Complete language histories were unavailable for some temporary staff, and incidental media exposure could not be fully reconstructed. Exposure to German, Rhine Franconian speech or English with a similar accent consequently remains possible.

Shared nuclear genotype offers further alternatives through craniofacial structure, tongue mobility, laryngeal anatomy, auditory sensitivity, motor timing and respiratory coordination. Routine examination found no gross palate, tongue or jaw abnormality, but no detailed vocal-tract study was completed. Accelerated growth and metabolic disease could affect respiratory support, phonation, voicing and difficult consonants. Some features described as accent, including devoicing and consonant substitution, could reflect restricted motor control. Agreement between the reviewers does not exclude those routes to a similar pronunciation pattern.

The initial classifications were compatible with the donor's broad regional background, without identifying Kaiserslautern or a precise locality. The regional alternatives overlap, and the small, selected archive offered many possible vocal and behavioral correspondences. It supplies no defensible estimate of chance agreement. Unlike the receiver case, the speech record has no single donor acquisition event comparable to the hook-switch fault; its features could have developed together over prolonged exposure and motor development.

I retain GIAM-27 as a candidate donor-concordant articulatory pattern and a boundary observation. The reviewers recorded their regional classifications before provenance release; comparison afterward showed broad agreement with the donor's background. The pronunciation pattern recurred across connected speech. Its causal specificity remains lower than that of the ordered receiver sequence. Shared anatomy, development, illness, unrecorded exposure and archival selection remain sufficient uncertainties to require prospective speech-motor assessment. The case establishes neither transfer of an acquired accent or language nor continuity of autobiographical memory or personal identity.