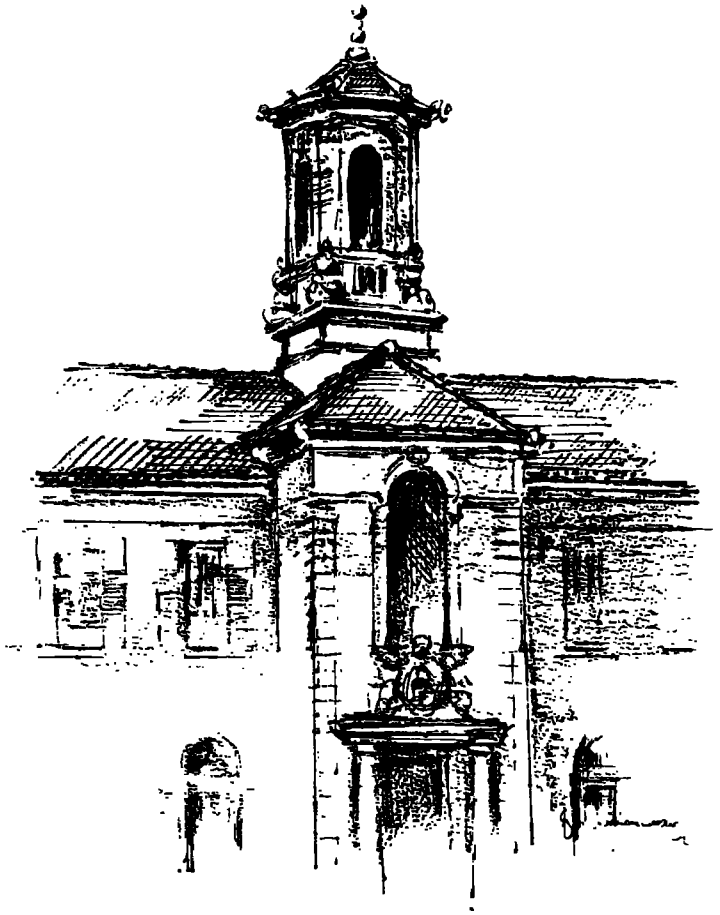
CONGRESS III
1988
KONGRES



BLOEMFONTEIN

S.A. Society for Surgery of the Hand

S.A. Vereniging vir Handchirurgie

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1988

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ANNUAL GENERAL MEETING
ALGEMENE JAARVERGADERING

5 SEPTEMBER 1988

16h15 — 17h30

(members only/lede alleenlik)

— 1 —
Welcome address by the President
Verwelkoming deur die President
— 2 —
Apologies
Verskonings
— 3 —
Proxies
Volmagte
— 4 —
Minutes of the previous Annual General Meeting
Notule van die vorige Algemene Jaarvergadering
— 5 —
Matters arising from the minutes
Sake wat uit die notule voortspruit
— 6 —
President's report
President se verslag
— 7 —
Honorary Secretary/Treasurer's report
Ere-Sekretaris/Tesourier se verslag
— 8 —
Admission of non-medical members to Special Groups of the MASA
Toelating van nie-mediese lede tot Spesiale Groepe van die MVSA
— 9 —
Proposed admendments to Constitution
Voorgestelde wysigings aan Grondwet
— 10 —
Smith & Nephew Literary Prize
Smith & Nephew Literêre Prys
— 11 —
Refresher Course in Basic Hand Surgery
Opknappingskursus in Basiese Handchirurgie
— 12 —
Announcement of President-Elect
Aankondiging van Pasverkose President
— 13 —
Membership
Lidmaatskap
— 14 —
Next Annual General Meeting
Volgende Algemene Jaarvergadering
— 15 —
General
Algemeen

SOCIAL EVENTS
SOSIALE BYEENKOMSTE

4 SEPTEMBER 1988

18h00 — 20h00

COCKTAIL PARTY/SKEMERPARTY

(delegates and partners/
afgevaardigdes en metgeselle)

HOLIDAY INN

5 SEPTEMBER 1988

- 19h30

BANQUET/BANKET

(delegates and partners/
afgevaardigdes en metgeselle)

HOLIDAY INN

INSTRUCTIONAL COURSE
OPKNAPPINGSKURSUS

SUNDAY/SONDAG 4 SEPTEMBER 1988

presented by/aangebied deur

PROFESSOR JAMES R. URBANIAK
Durham, North Carolina

07h30 — 08h30	Registration/Registrasie: Bloemfontein Sun Hotel
08h30 — 09h20	Thumb Reconstruction
09h20 — 09h30	Discussion/Bespreking
09h30 — 10h20	Vascular Insufficiency
10h20 — 10h30	Discussion/Bespreking
10h30 — 11h00	Tea/Tee
11h00 — 11h50	Fusion versus Arthroplasty
11h50 — 12h00	Discussion/Bespreking
12h00 — 12h50	The Failed Nerve Repair
12h50 — 13h00	Discussion/Bespreking
13h00 — 13h45	Lunch/Middagete
13h45 — 14h35	Radioulnar Synostosis
14h35 — 14h45	Discussion/Bespreking
14h45 — 15h25	Correction of Post-Traumatic Flexion Contracture of the Elbow by Anterior Capsulotomy
15h25 — 15h30	Discussion/Bespreking
15h30 — 16h00	Tea/Tee
16h00 — 16h50	Scaphoid Fractures/Scaphoid Strain
16h50 — 17h00	Discussion/Bespreking
18h00 — 20h00	Cocktail Party/Skemerparty: Holiday Inn (delegates and partners/ afgevaardigdes en metgeselle)

MONDAY/MAANDAG 5 SEPTEMBER 1988

07h00 — 08h00	Registration/Registrasie: Odeion
08h00 — 09h55	Scientific presentations Wetenskaplike voordragte
09h55 — 10h30	Tea/Tee
10h30 — 12h30	Scientific presentations Wetenskaplike voordragte
12h30 — 13h30	Luncheon/Middagete
13h30 — 14h50	Scientific presentations Wetenskaplike voordragte
14h50 — 15h15	Tea/Tee
15h15 — 16h05	Scientific presentations Wetenskaplike voordrage
16h15 — 17h30	Annual General Meeting (members only) Algemene Jaarvergadering (slegs lede)
19h30	Banquet (delegates and partners) Banket (afgevaardigdes en metgeselle) Holiday Inn

THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND CONGRESS
DIE SUID-AFRIKAANSE VERENIGING VIR HANDCHIRURGIE KONGRES

5 SEPTEMBER 1988 — BLOEMFONTEIN

07h00 — 08h00 Registration/Registrasie: Odeion

CHAIRMAN/VOORSITTER: DR L.K. PRETORIUS

08h00 — 08h15 Secondary repair of extensor tendons — Dr K.S. NAIDOO

08h15 — 08h20 Discussion/Bespreking (to be led by Dr L.K. Pretorius)

08h20 — 08h45 Complications of the reconstruction of flexor tendons by the silicone rod technique — PROF J.R. URBANIAK

08h45 — 08h50 Discussion/Bespreking

08h50 — 09h00 The treatment of flexor tendon injuries at Tygerberg Hospital — DR D. BOTES

09h00 — 09h05 Discussion/Bespreking (to be led by Dr S. Biddulph)

09h05 — 09h15 Flexor tendon sheath infection — DR S. MALOON

09h15 — 09h20 Discussion/Bespreking (to be led by Prof U. Mennen)

09h20 — 09h35 Carpal tunnel syndrome - DR I.E. GOGA

09h35 — 09h40 Discussion/Bespreking (to be led by Dr S. Biddulph)

09h40 — 09h50 Kienböck disease — DR R. NACHEF

09h50 — 09h55 Discussion/Bespreking (to be led by Dr L. Muller)

09h55 — 10h30 Tea/Tee

CHAIRMAN/VOORSITTER: DR L.H. MULLER

10h30 — 10h45 Problems of the thumb and first web space — PROF C. BLOCH

10h45 — 10h50 Discussion/Bespreking (to be led by Dr K.S. Naidoo)

10h50 — 11h00 A bi-valve splint for the hand — DR A.J. BRUCE-CHWATT

11h00 — 11h05 Discussion/Bespreking (to be led by Prof U. Mennen)

11h05 — 11h20 What does tourniquet release do to intracompartmental pressure? — DR M. MARS

11h20 — 11h25 Discussion/Bespreking (to be led by Dr S. Biddulph)

11h25 — 11h40 The compound injury from high voltage electricity — PROF U. MENNEN

11h40 — 11h45 Discussion/Bespreking (to be led by Dr L. Muller)

11h45 — 11h55 Left = Right? A study to determine the volumes of left and right hands — MS C.A. VAN VELZE

11h55 — 12h00 Discussion/Bespreking (to be led by Dr L.K. Pretorius)

12h00 — 12h25 Replantation: a 16-year experience — PROF J.R. URBANIAK

12h25 — 12h30 Discussion/Bespreking

12h30 — 13h30 Lunch/Middagete

CHAIRMAN/VOORSITTER: DR S.L. BIDDULPH

13h30 — 13h55 Medico-legal risks of surgery — PROF S.A. STRAUSS

13h55 — 14h00 Discussion/Bespreking

14h00 — 14h25 Total elbow allografts — PROF J.R. URBANIAK

14h25 — 14h30 Discussion/Bespreking

14h30 — 14h45 Reactive synovitis following silicone implant arthroplasty — DR F. LIEBENBERG

14h45 — 14h50 Discussion/Bespreking (to be led by Dr K.S. Naidoo)

14h50 — 1515 Tea/Tee

CHAIRMAN/VOORSITTER: DR K.S. NAIDOO

15h15 — 15h30 A modified epineural repair of peripheral nerves: a new technique — DR R.S. BOOME

15h30 — 15h35 Discussion/Bespreking (to be led by Dr K.S. Naidoo)

15h35 — 16h00 Radial nerve compression neuropathies — PROF J.R. URBANIAK

16h00 — 16h05 Discussion/Bespreking

16h15 — 17h30 Annual General Meeting/Algemene Jaarvergadering (members only/slegs lede)

19h30 Banquet (delegates and partners)
Banket (afgevaardigdes en metgeselle)
Holiday Inn

SUMMARIES
OPSOMMINGS

Secondary Repair of Extensor Tendons

K.S. NAIDOO

This paper presents a series of patients who underwent secondary repair of extensor tendon injuries. The methods of repair include interposition grafting and tendon transfer. Details of the operative techniques and the results of repair will be illustrated.

Complications of the Reconstruction of Flexor Tendons by the Silicone Rod Technique

J.R. URBANIAK

The use of the silicone rod has provided a good method of reconstructing severely involved digits with flexor tendon injuries. Twenty years of experience with this technique has enabled us to diminish and overcome many of the complications of this procedure.

Silicone rod complications include flexed DIP joint (with or without progressive contracture), aseptic tenosynovitis, septic tenosynovitis, tendon bowstringing, insufficient excursion and poor skin healing.

Steps to prevent DIP flexion are to excise the sheath distally, place a pin across the DIP joint for four to six weeks, decrease the interval between the first and second stages, insert a graft and minimize the scar distally. Progressive deformity sometimes occurs after the second stage is done.

Aseptic tenosynovitis occurs when the silicone is contaminated, the pulleys are too tight, rod is too long, rod is too superficial, or an inappropriate wrist position used during the first stage. Treatment includes culturing the area, applying a splint for two weeks, administering antibiotics, and correcting the problem whether it be pulley, rod or skin. Treatment for septic tenosynovitis is similar but also includes removing the rod and repeating the procedures two months later if other treatment efforts do not succeed.

To prevent tendon bowstringing, there should be at least three strong annular ligaments near the joint, especially near the PIP joint. The rod must also glide easily.

Inadequate excursion occurs when the graft is too long, there are insufficient pulleys, there is paradoxical extension or there is decreased passive range of motion prior to the second stage procedure.

The Treatment of Flexor Injuries at Tygerberg Hospital

D. BOTES

A. AIMS: To evaluate certain factors as related to flexor tendon injuries.
B. Research programe:
   1. Follow-up on patients that were surgically treated at Tygerberg Hospital for flexor tendon injuries in the time period January 1985 — December 1986 (2 years).
   2. A computerised (questionnaire) database is being used to obtain a statistical analysis of the following factors:
      (a) Patient data
      (b) Information concerning the injury
      (c) Treatment given
      (d) Complications
      (e) Evaluation
C. Recommendations: Will be made concerning the epidemiology, evaluation, treatment, prevention of complications and evaluation of flexor tendon injuries in long term follow-up.
D. Time span of programme: Although this follow-up effort concerns injuries in a two-year time span, ongoing studies will be done where all new patients' information will be entered in the computerised database to be followed up and evaluated at a later date.

Flexor Tendon Sheath Infection

S. MALOON, P. ANDERSON, M. OPITZ, J. DE BEER, M. SINGER

A prospective study of flexor tendon sheath infection and their management was undertaken by the Groote Schuur Hospital Hand Unit over a 2 year period between June 1986 and June of 1988. Most cases resulted from minor penetrating trauma over the volar aspect of a digital flexion crease.

The management of these infections, surgical controversies and the results of 40 patients are presented and discussed.

In contradistinction to recently published literature, we have found that these infections are not uncommon and are associated with significant morbidity. Late presentation, underlying diabetes mellitus and human bites were associated with a poor prognosis.

Carpal Tunnel Syndrome in Black South Africans

I.E. Goga

This paper evaluates the incidence of carpal tunnel syndrome in the black population. It will show that the carpal tunnel syndrome is indeed fairly rare in black people and will emphasize that most patients will have some other pathology giving rise to the symptoms.

The paper will show the various pathologies found in our patients at King Edward Hospital over the last 5 years which will include a case of tumoral calcinosis and liponeuromatosis. Presenting symptoms and clinical features will be evaluated.

It will emphasize the necessity to examine carefully every patient with carpal tunnel syndrome especially in the black South African population.

Kienböck Disease

R. NACHEF, E. SCHNAID
S. BIDDULPH

Twenty cases of Kienböck disease treated by different surgeons in South Africa were followed up, the following considerata were considered:

— Age, sex and race
— Bilaterality
— Presence or absence of ulnar variance and incidence of trauma as precipitating factor

Follow-up varies from 6 months to 5 years.

The methods of treatment used by various surgeons as well as the late outcome of their cases will be discussed.

Problems of the Thumb and First Web Space

C. BLOCH

The thumb and first web space contribute at least 50% to the functional value of the hand. Thus any loss of function in this digit and its adjacent web can have enormous consequences for the unfortunate incumbent.

Problems in this area can be divided into two main groups, viz: Congenital and Acquired.

Congenital causes include such problems as:

radial ray defects, e.g. absent thumb
polydactyly
hypoplastic thumb
thenar muscle atrophy or absence

Acquired causes can be classified in the usual way into traumatic, neo-plastic, metabolic etc.

In the limited time available only a few of these conditions will be discussed, concentrating mainly on the congenital causes.

A Bi-Valve Splint for the Hand

A.J. BRUCE-CHWATT

The release of acquired or congenital contractures of the hand is a relatively simple procedure.

Of considerably more difficulty is the maintenance of the hand in the corrected position during the phase of consolidation of skin grafts. A technique of producing a light and comfortable bi-valve splint for long term use is presented together with a review of the problems involved.

What does Tourniquet Release do to Intracompartmental Pressure?

M. MARS

The practice of applying a compressive dressing prior to releasing the tourniquet while operating under a bloodless field can theoretically result in intracompartmental pressures in the region of 30 mmHg. The aim of this study is to determine the pressure changes occurring both intracompartmentally and under the bandaging following the release of a tourniquet.

METHOD: 5 Dog-faced baboons were each given a general anaesthetic. The right arm was exsanguinated using an Esmarch's bandage and a pneumatic tourniquet was applied at 100 mmHg above systolic pressure for one and a half hours. During this time a slit catheter was inserted into the flexor compartment of the forearm and a below elbow plaster of paris bandage was applied over an external pressure measuring device. Following tourniquet release both the intracompartmental pressure and the pressure under the POP were monitored for a further three hours.

RESULTS: The mean intracompartmental pressure prior to the application of POP was 5 mmHg SD ± 3,7. The pressure generated by the POP was 6,6 mmHg ± 3,7 which caused the intracompartmental pressure increase to 13,8 mmHg ± 3,5. Tourniquet release caused an immediate increase in both pressures which returned to pre-release levels within 30 minutes. Both pressures then fell further, such that within 1 hour of release the mean pressure under the POP was 1,4 mmHg and the mean intracompartmental pressure was 6 mmHg. There was no further fluctuation of pressure over the following 2 hours.

CONCLUSIONS: 90 minutes tourniquet time was not associated with a sustained increase in intracompartmental pressure and there was no evidence of ischaemic oedema. There appears to be a homeostatic mechanism to equilibrate intracompartmental pressures in the normal limb.

The Compound Injury from High Voltage Electricity

U. MENNEN

When dealing with a high voltage electric injury, one must realise that a crush injury is a more appropriate term than a burn injury. The eventual usefulness of the arm and/or hand should be weighed against the very intensive surgical treatment of that limb. This evaluation should be done during the initial stages which in turn will influence the early management. The treatment should therefore be aggressive and should be focused on a high renal output as well as extensive debridement which may include amputation at an early stage.

Three recent cases demonstrated this unsparing approach.

Left = Right? A Study to Determine the Volumes of Left and Right Hands

Ms C.A. VAN VELZE

In order to use the unaffected hand as an effective parameter with which to compare the extent of oedema of the affected hand, a study was done to determine the difference in volume of normal left and right hands of male labourers.

With the help of a volumeter, the volumes of the hands of 263 male labourers were determined.

After analysing the data, a graph was drawn, which can be used to predict the volume of the affected hand, if the volume of the unaffected hand is known.

CONCLUSION: The volume of one hand is a reliable predictor of the volume of the other.

This is an effective, practical method to follow progression during hand therapy.

Replantation: A 16 Year Experience

J.R. URBANIAK

Digit and hand replantation utilizing microvascular anastomoses of small arteries and veins has been used by our institution for the past 16 years as an effective method of reconstructing hands that have sustained amputations.

Proper preparation of the amputated part is an important initial step to ensuring the most optimal outcome. The part should be immersed in saline or Ringer's lactate solution in a plastic bag and the bag placed on ice. Do not freeze the part. A compression dressing is then applied to the stump. It is essential that no vessels are ligated and no vessels perfused.

The surgical procedure begins with midlateral incisions on the involved digit. Vessels and nerves are then isolated and debrided. The bone is shortened and fixed preferably with an intramedullary pin when feasible. Repair of the periosteum should be done when possible, followed by extensor tendon (all components) and flexor tendon repair. Anastomoses of arteries, repair of nerves and anastomoses of veins should be the last sequence of events before skin coverage is obtained.

Post-operative care consists of loose closure of the wound and application of a bulky dressing. The extremity should be elevated and monitored including assessment of color, capillary refill, turgor and hourly temperature readings (keeping the digit above 30° C).

Since 1972 over 1500 amputated or nearly amputated parts were referred to Duke University Medical Center and replantation or revascularization attempted. We have achieved an overall viability rate of 86%.

Twelve conclusions have been made from data and experience gained:

1. Sensitivity (two-point discrimination is better in children (less than 5mm in most) than adults, although adults obtain a very acceptable result (less than 10mm in 50% — average 13mm).
2. Viability rate is less in children, but functional results are better with growth continuing.
3. Pain is not a problem.
4. Cold intolerance resolves in two to three years.
5. Removal of the replanted part occurs infrequently.
6. It is worthwhile to replant avulsed parts.
7. The thumb should always be replanted.
8. An isolated amputated finger should be replanted if the amputation is distal to the superficialis insertion but not replanted if proximal to that tendon's insertion.
9. An incomplete ring avulsion should be replanted while a complete ring avulsion should not.
10. Results justify expenditures.
11. Loss from work is not excessive.
12. Replantation centres are recommended.

Total Elbow Allografts

J.R. URBANIAK

Cadaveric Elbow Allografts.

Cadaveric elbow allografts have been inserted in thirteen patients over the last nine years. Twelve patients had destroyed elbows from trauma and one from tumor resection. All patients had pain, restricted motion, and/or instability of the elbow. The osteochondral cadaveric allografts were prepared by exposure to dilute glycerol and then frozen to $-100°$ centrigrade.

A longitudinal, posterior approach was used to expose the elbow and fixation was achieved with compression plates or Rush rods. The average age of the patient was 36 years (range 20-64, median 28) with follow-up ranging from one to nine years. The humerus and ulna were replaced in eleven patients and the humerus only in two patients.

At follow-up, pain has not been a significant complaint. The average gain in flexion/extension is 58° and in pronation/supination 30°. Complications include non-union in four patients, joint instability in two patients, radial nerve palsy in one patient, graft resorption in two patients and infection in two patients. Three patients have had the allograft removed.

Frozen osteochondral allografts to replace the distal humerus and proximal ulna can result in a useful, painless range of motion. However, significant complications may develop and joint deterioration has been noted at two years. Potential candidates for the procedure are patients who are too young or who have insufficient bone stock for conventional implant arthroplasty or those who refuse elbow arthrodesis.

Reactive Synovitis following Silicone Implant Arthroplasty

F. LIEBENBERG

We recently saw 12 patients who developed foreign body synovitis after implant surgery with silicone rubber. (The scaphoid in four patients, the lunate in four patients, the trapezium in one patient, total wrist arthroplasty in one patient, one ulnar head and one radial head replacement).

All patients required revision surgery. As it is impossible to review all patients who had synovitis after silicone arthroplasty, the incidence of the synovitis cannot be determined. Carter, reviewing his own cases, found late radiographic lesions in 75% of scaphoid and 55% of lunate implants. All patients had excellent results initially, but developed swelling, discomfort and pain. X-rays revealed progressive erosive osteolysis and the synovium showed silicone debris surrounded by multinuclear foreign body giant cells. All the removed implants were deformed and scanning electron microscopy showed that the silicone microparticles were the result of implant degeneration and erosion.

A modified Epineural Repair of Peripheral Nerves — A new technique

R.S. BOOME

One of the running problems in peripheral nerve repair is the control of tension across the repair site. A new technique which the author has been using clinically for some years was performed on experimental animals to quantitate the benefits.

The sciatic nerve of the rabbit was used as a model and three types of repair were tested, namely:

1. the standard epineural repair
2. the new modified epineural repair using sutures
3. and the same modified epineural repair using tissue glue

The experimental results will be presented and discussed.

Radial Nerve Compression Neuropathies

J.R. URBANIAK

Radial tunnel syndrome is a condition often misdiagnosed as "tennis elbow" or "resistant tennis elbow". Symptoms include nocturnal or post exercise pain at the extensor origin, pain with the wrist in palmar flexion and pronation and pain with the wrist in extension and supination against resistance. Tenderness to palpation is usually experienced. The best test for diagnosis of the syndrome is diagnostic blocks. Electrical studies are not helpful as they are usually normal.

Pathology of the syndrome is usually attributed to the anatomical structure of the radial tunnel. These structures include the fibrous bands in front of the radial head, the "recurrent" radial vessels (Leash of Henry), the extensor carpi radialis brevis, the arcade of Frohse and the supinator.

Treatment of the radial tunnel syndrome can be conservative or surgical. Conservative treatment includes rest and splinting, avoidance of provocative positions and administration of antisteroidal anti-inflammatories. If surgery is necessary, the surgeon may utilize the anterolateral approach, the posterolateral approach or the transbrachioradialis approach.

Patients with this syndrome may have more than one lesion or area of compression contributing to symptoms experienced and influencing results of treatment.

A second radial nerve compression neuropathy involves the posterior interosseous nerve. Symptoms of this syndrome include weakness in finger and thumb extension (may be one or more digits) and weakness in grip with the wrist in radial deviation or extension. Diagnosis is often delayed since there is no pain or sensory deficit.

The pathology of posterior interosseous nerve syndrome is attributed to anatomical lesions. Its etiology commonly involves entrapment of the proximal supinator. Trauma, inflammation or masses may also be the source of the syndrome. Iatrogenic causes including resection of the radial head, injections and open reduction internal fixation of forearm fractures can also be contributory to the syndrome.

A good diagnostic test to determine the presence of the syndrome is to administer succinyl choline.

The preferred surgical approach is the anterolateral approach. Motor return following surgery may take more than five to seven months. Tendon transfers may be used but are rarely indicated.

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PROFESSOR JAMES R. URBANIAK
Durham, North Carolina

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Professor Urbaniak
MNR het ruim tot die uitgawes van
Professor Urbaniak bygedra

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