

# Ultrasonic Glasgow

A celebration of The Glasgow School of Art's contribution to the history and development of medical obstetrics ultrasound.



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## **THE GLASGOW SCHOOL OF ART**

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**Acknowledgements**

# Human echoes: an oral record of women's lived experience of ultrasound during pregnancy in 1960s Glasgow

Susan Roan and Emma Keogh

'Human echoes' is an ongoing practice-based research project that seeks to give voice to the lived experience of women in Glasgow who received obstetric ultrasound scans in the 1960s, when Glasgow led the world in its development.

The experiences of childbearing for the women interviewed for this project were vastly different from those of their own mothers. As the place of birth shifted from home to hospital, there was a seismic shift in the culture of pregnancy and childbirth in the UK. This project seeks to record narratives of pregnancy and birth as part of this changing culture in 1960s Glasgow. Drawing on sound recordings of 28 interviews with midwives and doctors who witnessed the early use of obstetric ultrasound and the women who had an ultrasound scan during their pregnancy in Glasgow between 1963 and 1968, this project aims to shine a light on the narratives of the women who were, themselves, pioneers of ultrasound.

For this publication and exhibition, extracts from the many narratives shared by the women, midwives and doctors during interviews conducted between March and June 2019 have been selected to take the reader through the process and experience of having an ultrasound scan - before, during and after - the event. We provide, for context, the questions we asked during the interviews.

## Perspectives from Medical Staff

### Patricia Cassidy

Pupil Midwife 1964-65

Clinical Midwife 1965-84

Midwifery Lecturer 1984-2004

The Queen Mother's Hospital

Professor Donald used to talk about the 'iron curtain of the abdomen'. And he was – *fascinated* about what went on and he thought if he could get behind that iron curtain, then we could find out more about the progress of pregnancy. He wanted to know, *what* was going on *inside* – and could he do anything about that – and could he help.

I remember Professor Donald giving a lecture and talking about how he went to Babcock and Wilcox...and he talked about something that he was interested in that he found out during the war...and if there were transmission of sound waves through the water, they would bounce off matter and be referred back – and he thought – If you can you do it through water, can you do it through liquor?<sup>1</sup>

Before the ultrasound, they didn't *know* what was going on. Every woman who was pregnant just hoped and prayed that she would have a healthy outcome. They *did not know* if there was a problem...they didn't know about that until the baby was born. Occasionally, if there was a problem, they would have an x-ray. Medical staff were always reluctant to do x-rays during pregnancy for reasons that are well documented. We would do a lot more palpating of the abdomen<sup>2</sup>, yes – in those days

we would palpate the abdomen – and we learned a lot that way about the lie and the presentation of the fetus... Nowadays, it's sonar and they use inch tapes and things, that we didn't use, we just used our hands – and our skill, in palpating the abdomen...

We did have a lot of patients in those days – if there was any prenatal bleeding, then the worry was, it would be a *placenta praevia*<sup>3</sup> So any prenatal bleeding, we kept the patients in because if they started to bleed, they would bleed very severely. And you *could not* tell. One thing that was totally, totally – *forbidden* was to do a vaginal examination – a digital examination prenatally [if there was] any bleeding *in case* you provoked more bleeding. So, we *did not know* where the placenta was until the clinical signs would manifest themselves. That was why we kept patients in.

### **Dr Burnett Lunan**

Senior House Officer 1966

Junior Doctor 1969

The Queen Mother's Hospital

The ultrasound machine had been used in Rottenrow<sup>4</sup> as Ian Donald was developing this prototype, as it was called – an ultrasound, and there was also I believe a machine at the Western Infirmary for gynaecological problems but as far as obstetrics was concerned, when the Queen Mother's Hospital<sup>5</sup> opened in 1964 the equipment that Donald had been working on was taken with his team to the The Queen Mother's Hospital and it was established there – and they had an ultrasonic department in the new building. It wasn't just a "big cupboard" which they used in the old hospital and so they had the facilities for women to prepare for being examined and that sort of thing built into the hospital.

It was obviously a new development and – there was a lot of sort of – well there was even controversy about it because – people were unsure of how

safe it was going to be and how much informed consent you could expect patients to give for these procedures to be carried out. And inevitably in medicine, there was a strong conservative with a small 'c' element, that sort of resisted – moving into areas that they were unfamiliar with. But on the other hand, there was this – I mean Ian Donald was a charismatic personality and he certainly provided a lot of enthusiasm for the research that was being done at that time, and was very optimistic about its uses and so whenever the opportunity arose – he loved an audience and he would take the students in to see a procedure being carried out. And even as junior doctors – we would be expected to follow patients into the examination area and observe the examination of the patient.

...there was an element of wonder about it. Previously you saw images on say an x-ray which were static, they were just – one photograph of what was going on, whereas with the ultrasound you were actually seeing *movement* and – *that in itself* – was remarkable to see and obviously it is an insight into what was going on inside the womb – and from that point of view, yes it was completely new... but – *to see* – a movement inside their uterus was obviously – quite an exciting thing to see.

### **Perspectives from the women who experienced ultrasound scans and midwives who accompanied them**

#### ***How did it come about that you had/saw an ultrasound scan?***

#### **Pat Anusas**

Midwife 1963-65

The Queen Mother's Hospital

I was working as staff midwife in the West Wing. The day that I was asked, the sister of the ward said to me "Pat, you go along, Professor Donald has this thing going on" – and it was very much like, it was a trial, but it wasn't going to come to anything – it was

a feeling that it was just Professor Donald who was such a wonderful man – but – “just you go along and see what it’s all about” – and I went along on those terms – not thinking that it was going to revolutionise the whole of midwifery care, never for a minute did I think that – never.

### **Elizabeth Cuninghame**

1970

I wasn’t really keeping well after losing the baby so I went to see this other doctor cause my friend had said how nice he was...and he was a wonderful man and he said to me when you get pregnant again I’m going to get in touch with a friend of mine and that was Professor Ian Donald, “and he’ll look after you”. So I had to go out to Glasgow – to get the scan.



[Roberta Capuano: summer, 1966.](#)

Reproduced by kind permission of Roberta Capuano.

### **Eleanor Scanlon**

Student Nurse 1968

The Queen Mother’s Hospital

That particular day, because I’m this spare part, somebody has said, “you go with Mrs – the lady. She’s going down to get this ultrasound done and it’s down at the Western<sup>6</sup>, so – you accompany her”. So I go and I meet the lady and “oh I’ve to take you to this *thing*” – The two of us are all excited because we haven’t a *clue* what we’re going to.

### **Patricia Cassidy**

Pupil Midwife 1964-65

Clinical Midwife 1965-84

Midwifery Lecturer 1984-2004

The Queen Mother’s Hospital

Professor Donald – oh everybody metaphorically stood to attention when he came in – it was the Sister that would take him round and he usually had an entourage if he was doing a visit – but he came in at other times, quite unofficially – when he was looking for patients to scan.

### **Alice Cumming**

1967

My mum was an auxiliary, well, something more than an auxiliary, but she worked in the theatre a lot – and that’s how I got asked if I would come and have the scan taken – I didn’t know what a scan was – “oh you’ll just do it [for Professor Donald]” – She just said you would *do it*, not *will* you – “you’ll *just come*” – and even as a married woman and pregnant, you still did what your mother said.

### **Anne McCurry**

1966

My visits prior – they thought I was very large – “Was there twins in the family?” And I said “Yes, there were two sets of twins in the family” – so they said that I may be expecting twins – so an appointment was made.

### **May Boland**

1963

I thought it was a fairly normal pregnancy. My dad insisted on seeing



a gynaecologist obstetrician in the West End. We were living in Largs so, I used to come up for my checkups, and one of those checkups – that was probably the end of November '63 by that time. One of these checkups he asked the usual questions of normal movement – and I said “How would I know about normal movement? I’ve never been pregnant before”. And he said “I’m not very happy about the size of the fetus. How would you feel about having a proper checkup?” And it was to be the Rottenrow, and he told me that a Professor Donald was trialing these things – and I said “Fine, I would do whatever”.

***What did you know about having an ultrasound scan before you had/saw one?***

**Janette McMaster**

1965

It was only just kind of opened, the Queen Mother’s at that time – It wasn’t long opened I don’t think – just remember vaguely – and thinking and it was absolutely a miracle, you know this *magic* that you can actually see bits of the baby.

**Janice Thomson**

1967

Nobody knew what I was talking about – and I think because my Dad had been a naval officer I was kind of familiar with the concept of ultrasound – because they had ASDIC<sup>7</sup> – and during the war, they used it to detect submarines – under the ships – so I knew it was the same idea as that and probably had been developed from that – so that’s how I explained it to most people.

**Sheena Kyle**

1965

No, never heard of it. It was Professor Donald and he came in and explained that it was pioneering and they were starting to use this. And he says it doesn’t harm you in any way, you don’t feel it, it’s not painful – he probably had to explain that, people

weren’t sure – they wouldn’t have known whether they were drilling in, or...

**Alice Cumming**

1967

I’d never heard it talked about. “You’ll get a picture of your unborn baby – they’ll be able to determine how well your baby is” is what she said – that was how she [my mother] got me to go.

***Can you tell us what you remember about the day of the ultrasound scan?***

**Anne McCurry**

1966

I made my way to the Queen Mother’s Hospital – everybody talked about *the hill* up the Queen Mothers – I saw it recently– it’s really not that big, but in those days – to me – it was Mount Everest.

**Alice Cumming**

1967

The Queen Mothers was *the* place then. It was really new and fresh and lovely, it really was *beautiful*...

**Elizabeth Cuninghame**

1970

I was very nervous cause even you know the fact that I had to go away to Glasgow, [from the Isle of Islay] in those days we didn’t travel as much as we do now so it was a very big thing all in all, to get on the ferry, and then drive to Glasgow, find the hospital and you’re all very nervous and uptight and worried about what the scan would show too you know, Was everything going to be ok?

**Elsbeth McLellan**

1968

I had to go to the Queen Mother’s hospital, which was quite a trek from Paisley, and I had Mhairi with me, my other girl. And we had to get two buses I think, and then walk up the big hill, right up to the Queen Mother’s. And when we got there – I remember the doctor so vividly. I could almost

recognise if he walked in here, although he would be totally different now. He was black, he was so black and I hadn't really seen a black person before and he was so charming – and he explained everything to me, what was going to happen, and all the rest of it. Very, very reassuring – And then I had to drink, I think it was about four pints of water. And, you know it was explained to me that I would need to keep that in while they were doing the ultrasound – and the reason I had to drink it was to lift the womb up so that it could be, you know, the machine could get the photographs or whatever. So I did that with Mhairi sitting beside me [laughs] then they took me in where the machine was and it was [breathes in] really quite – you know, like science fiction as I say.



Sonia Wilson: the caravan at “Ringstones” on the day of my 21st birthday and first anti natal appointment at QMH, 1967.

Reproduced by kind permission of Sonia Wilson.

### May Boland

1963

...and I can remember perfectly – on the Friday, if I think about it that was probably the 22<sup>nd</sup>. On the Friday, was the day that John F. K. was assassinated. We were sitting in our living room and I was getting upset at the thought of coming, because

something wasn't right – and my girls were all working underneath – it was a Friday, a late-night – because we lived above the hairdressers, the girls were all working – and there was a dance on in the hotel just down the road, and I think it was, whatever the news programme was, the night-time news programme – and all of a sudden it came up that – and it was – devastating – everybody was – My appointment to the Rottenrow was for the Tuesday, which was the 26th which was actually my wedding anniversary, my first wedding anniversary – I can remember greetin' – packing my wee suitcase that I had packed the year before for my honeymoon [laughs] and I went in – I think I was kept in overnight...

### Eleanor Scanlon

Student Nurse 1968

The Queen Mother's Hospital

And we got taken down in – I think it was a taxi – we didn't go in an ambulance, I think it was a taxi – it wasn't very far, you know. And we got to the Western and, of course, I'm on home turf there – and it's the x-ray department. And the x-ray department in the Western was *down* in the *dunny*. That was the expression used. It was *horrible*, it was the basement and it was *really, really* old-fashioned, very old-fashioned. Horrible kind of place to work *all day* – virtually no daylight – horrible. And these big long corridors with just curtains and so on, you know. And the patient and I arrive and she had to have this full bladder. I don't know if this still happens, but she had to have the full bladder and she was *very very* pregnant, you know, this lady. The baby was washing about in a tummy full of liquid but she still had to have the full bladder. So, she was a bit – em, you know – unhappy [laughs]. So I'm kind of chatting away and all that – and we waited in the corridor and then Professor Donald takes us in behind one of these sets of curtains. And he's his usual lovely self – I'd only seen him from afar at this point – em, he was just a sort of *God*

walking about the place – and I didn't really know him. I knew he was nice. He was a nice man and he was awful friendly.

### **Maureen McCarthy**

1967

I felt it was the early stages – they did explain quite a bit in the Queen Mother's you know, about it – and they were explaining about Professor Donald and Tom Brown and things like that – one time I went up for a checkup and they were doing the second scan and Professor Donald was there – you know, in the hospital. And I think it was actually passing I think, that's what it was – and I was waiting to go in. He said "Oh let's go and have a look – come in!"

***Can you describe as much as you can remember about having/seeing the ultrasound scan? Can you remember anything about the ultrasound machine? What did it look like? Do you remember who did the ultrasound scan?***

### **Sue Underhill**

1965

I suppose I was lying on a couch or something, ready to be examined – and he was a tall man, as you will probably know – and he was towering above me – and he said he was the only one in the world who could do this test – now that *did* frighten me...

### **Maureen McCarthy**

1967

One of the nurses put the gel on, and he's running – and of course I never thought to myself – gentleman he was, he was an absolute gentleman. I didn't think Who are you? – whatever. But now when I think on it, you know – I was quite *honoured* really.

### **Margaret Stratton**

1965

It was big yes, and he told me it was developed from sonar in submarines – he did tell me that, that's how he first got onto this thing and this was all experimental.



Maureen McCarthy: feeding Martin on the day of his christening, 1968.

Reproduced by kind permission of Maureen McCarthy.

### **Heather Thomson**

1967

But obviously you're very scared because you don't know what's happening – but they must have told me...not to worry about it, it wasn't sore, it was just to see how the baby was growing – which – she wasn't.

### **May Boland**

1963

My memory was of Professor Donald coming into the ward with what I would describe as an operating trolley with a great big square TV on it – and young students with him.

### **Anna McHarg**

1967

Professor Donald – he was the – he was God! [laughs] you know [whispers] *Professor Donald coming in – quiet!* [laughs] That's all I remember, I remember he was a big man, big tall man if I remember rightly – but [whispers] – he was *God!* [laughs]

### **Sonia Wilson**

1967

I remember where we were in the Queen Mother's Hospital and – the actual room was nothing like the

rooms that I had ultrasounds in after that time. It looked like it had been set up in a corridor – and there was a fire door here and the fire door behind me, and there was all this machinery, all this heavy machinery – it was just a jumble of stuff with a television screen – or a monitor of some sort – em – and you had to take *all* your clothes off – so literally you didn't have a stitch of clothing on – no bra, not anything. And they gave you a gown – that's all you had on. And then you went through to this room and lay on this table like a cadaver waiting for an autopsy and they poured oil all over you – and I was just back from South Africa, and I was just very young, and very slim, I had a suntan and my blonde hair – and I thought I was the bee's knees [laughs].



Janice Thomson: Simon at 2 weeks old, 1967.  
Reproduced by kind permission of Janice Thomson.

### Alice Cumming

1967

And when I got there, I thought it was just going to be my mum and Professor Donald and a nurse – no – there was about twenty-two American doctors there – he was trying to sell them this that he had invented. It was a room like this – it would maybe be 12 feet by 14 feet and a sort of like a dentist chair bed – that's all I can

remember – and dark – it was all in the dark – and I'm there thinking Oh God, why am I here, why did I allow this to happen?...

**Can you tell everything that you can remember about the ultrasound scan itself? Do you remember what you saw on the screen? Can you describe what you saw?**

### Eleanor Scanlon

Student Nurse 1968

The Queen Mother's Hospital

The lady, we'd to get her up on the table, which is *not* easy, because she's *really really* big. And he explains what he's going to do – and it's all about soundwaves – deep sea navy talk [laughs]. And she's just thinking – toilet, toilet [laughs] – and I'm thinking – *What the hell* is he on about? [laughs]. So anyway, he gets started and the stuff goes on the tummy and he started putting his little machine across her tummy – and he's *mega excited* at this picture of *the baby*. And she and I are looking at one another, you know – and there's this – bunch or scribble [laughs] on the screen [laughs]. There's nothing else you could call it but scribble. And, you know, nowadays they're fabulous, aren't they – whole babies there – but it was a bunch of scribble because it was only bouncing off bones. And, he has to say to us, "*That's the baby's head* – and that's the baby's *spine* – you really couldn't make out limbs, it was very, very rudimentary. And she and I nodded in agreement – and he was so happy that we felt happy for him [laughs] – but it just was – it was mystifying, completely mystifying...

### Anne McCurry

1966

I was told to look to the right – and I would see pictures, black and white. Looking at the screen it was like – space – it was like an alien from outer space, I couldn't even figure out a baby...

### **Patricia Cassidy**

Pupil Midwife 1964-65

Clinical Midwife 1965-84

Midwifery Lecturer 1984-2004

The Queen Mother's Hospital

It had to be *explained* what I was actually seeing – and of course, it has never been done before, nobody had ever *seen* it, there was no experience, there were no pictures in books or anything...this was *really* revolutionary.

### **Margaret Stratton**

1965

I just remember being a bit in awe, I never questioned why or what or anything but he said that he would have to diagnose that I was definitely pregnant, which I thought was a bit strange being admitted to the maternity hospital – we have to verify that you are pregnant, and he told me he was carrying out this new treatment. I do remember he was very tall and reddish hair, I do remember very gentle, very kind, and explained everything as he was going along – He told me it was developed from sonar in submarines – he did tell me that, that's how he first got onto this thing and this was all experimental – but in years later I thought, you know you just accepted that – you never thought, Gosh, I hope nothing could harm the baby! But no, he was very, very kind...

### **Maureen McCarthy**

1967

I just thought it was an absolutely fantastic machine, that I could look up – because they said to me, “Look over there and you’ll see it, what’s happening” – I didn’t think I would see that when I went into the room. I thought it was just like an x-ray I wouldn’t see anything – and he says “No, just look there and you see and the baby is moving” and things like this. Absolutely wonderful. Wonderful.



[Rachel Macleod, Baby's first feed at home, 1966.](#)

Reproduced by kind permission of Rachel Macleod.

### **Pat Anusas**

Midwife 1963-65

The Queen Mother's Hospital

When I went into the room I can always remember the room was all dark – the blinds were all shut, the patient on the bed and Professor Ian Donald was standing at the wall. What he said then was “I’m going to explain to you what’s going to happen to both me and the mother” – now I don’t know how far on in the pregnancy she was – if I can remember right, the picture of the baby that I saw – the outlines of the baby, it was very grainy – probably she would be about 30 weeks or something like that, I’m not exactly sure – Professor Ian Donald was the type of doctor who was extremely kind and he always put the patient first and he would always put the staff first – and he explained in detail, and I couldn’t believe it – I was standing there and I still to this *day* can’t believe what I saw. That when the screen came up – it was on the wall, and he was quite excited because it was working – he didn’t know if it was going to work or not –

but it *did* work. And both the mother and I were so excited – she couldn't believe she could see her baby on the screen on the wall – he was so excited when it eventually did show on the screen – I think he was absolutely – I think he probably was as shocked as we were, you know [laughs]. The screen for seeing the grainy picture of the baby, it was projected onto the wall, and that's why it had to be dark. I was wondering why I was going into a darkened room, but it was to see the picture more clearly. It was maybe 1 to 2 feet in size – maybe 24-30 inches. It was grainy but you could see the baby moving...

### Sonia Wilson

1967

... I'm lying there naked (laughs) – and – the machine broke down – and this doctor came – and he was very jolly and it was all like a big joke to him – and I could see *nothing*. I could see lights and I could see darkness – I didn't see any baby at all – and the baby was this size, you know [laughs] – I was looking for a *baby!* And – the machine broke down – and he's mumbling and trying to fix it and trying to fix it – and then he said he would need to phone for an engineer – and here I am, lying in the condition that I am lying in [laughs]. And he got a bit of paper towel off the wall and a great big roll like this – and placed it on my tummy or on my bosom – and all the oil that was under the – was getting soaked into the – I can see my bikini line through the paper! [laughs] – and this engineer came in [laughs] – this 25-year-old engineer came in with his toolbox and his screwdrivers – and – he was horrified – and I was horrified, and this doctor [laughs] – saw our horror and thought it was the funniest thing he had ever seen in his whole life – and was *cracking* with laughter – and this guy is down on the floor trying to hide, and I'm lying here naked trying to hide [laughs] with nothing to – [laughs] – I can see my toes – with just this *transparent paper*. It was *awful!* It was *horrifying!* It really was *awful*.

### Alice Cumming

1967

“Now, tell you what I'm going to do, I'm going to put a little oil on you and I'm going to scan this across, it won't hurt you in any fashion whatsoever” – that's how he spoke – I thought aye fine – I never answered – I was too terrified to answer...and it was so noisy – I remember the noise of it – it was like *crackling*.

I can actually close my eyes and I can still see the picture – it's just like em – black – and it's like dark shapes and light shapes and a wee – a wee squiggle in the middle – it doesn't look like a baby – but he was able to see – but I remember thinking – Oh that's moving in and out! –but I didn't realise – it's a *heartbeat* – cos I just thought his picture was moving in and out.

And – I got the picture which – the world was amazed at – black and white – I remember that he was all excited about this getting printed – and they were printing it for these Americans – **(SR) Did they give some prints to the Americans?** They might well have done – they wouldn't have asked my permission anyway cos you didn't have to give your permission for anything in those days – but I got to keep it. He said “I was an engineer long before I was a doctor” – he was very matter of fact – but there was a *kindness* to him...

### Did you get a photograph to take home?

#### Patricia Cassidy

Pupil Midwife 1964-65

Clinical Midwife 1965-84

Midwifery Lecturer 1984-2004

The Queen Mother's Hospital

I know that some were given out – but they were Polaroid and they were expensive – and I think it was the expense that meant that not everyone could automatically get a photograph.

**Wilma Paterson**

1967

But that was momentous because he took me up and he put me under his machine and produced *the photo*...it's one of my son's prized possessions.

**Elizabeth Cuninghame**

1970

Well he gave me the picture of my baby and he said "And I'm taking one of them to America cause I'm going out to America to you know, talk about the scans out there..."

**Maureen McCarthy**

1967

I do remember thinking when I got it done ... *I must keep these* [photographs] [laughs] – never thought I'd keep one for 51 years, but there you are.

**Alice Cumming**

1967

It was a Polaroid picture – it has a white border round it...It took about two minutes. I remember I was getting the oil taken off me and I was just a piece of meat lying on the table, I didn't count so nobody worried about me – and then him handing it to me – and saying – I remember what he said – "You're *very lucky*" – that was what he said – "you're *very lucky*" – and I thought, *So are you!* But I wouldn't have opened my mouth.



Anna McHarg: On our way home from a caravan holiday near Lochinver, 1967

Reproduced by kind permission of Anna McHarg

**Further work**

The above provides insightful glimpses from the many stories that participants shared about their experiences of ultrasound scanning during pregnancy in the Queen Mother's Hospital, when the technology had been newly invented in Glasgow.

During the interviews, further questions were asked about attitudes to pregnancy, experiences of pregnancy and prenatal care in 1960s Glasgow; sex education and birth knowledge at that time; ways of accessing knowledge of fetal development before obstetric ultrasound; and memories of the newly opened Queen Mother's Hospital. Further work is planned to make much more of this material available.

## Endnotes

- 1 The amniotic fluid is commonly called water or waters (Latin liquor amnii).
- 2 Abdominal palpation', means to examine by touching and feeling. A midwife or doctor will use abdominal palpation during an antenatal visit to examine the development and position of the fetus.
- 3 A condition in which the placenta partially or wholly blocks the neck of the uterus, so interfering with normal delivery of a baby.
- 4 Rottenrow is best known as the address of the former Glasgow Royal Maternity Hospital, founded in 1834, itself referred to locally as 'The Rottenrow' and which became a world-renowned centre of excellence in gynaecology.
- 5 The Queen Mother's Hospital, affectionately known as the Queen Mum's or QM, opened on the Yorkhill site in 1964 and closed in 2010.
- 6 The Western Infirmary served as a teaching hospital for Glasgow University. It opened in 1874 at the Gilmorehill campus in the West End of Glasgow and closed in 2015.
- 7 ASDIC was an early form of sonar used to detect submarines.

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