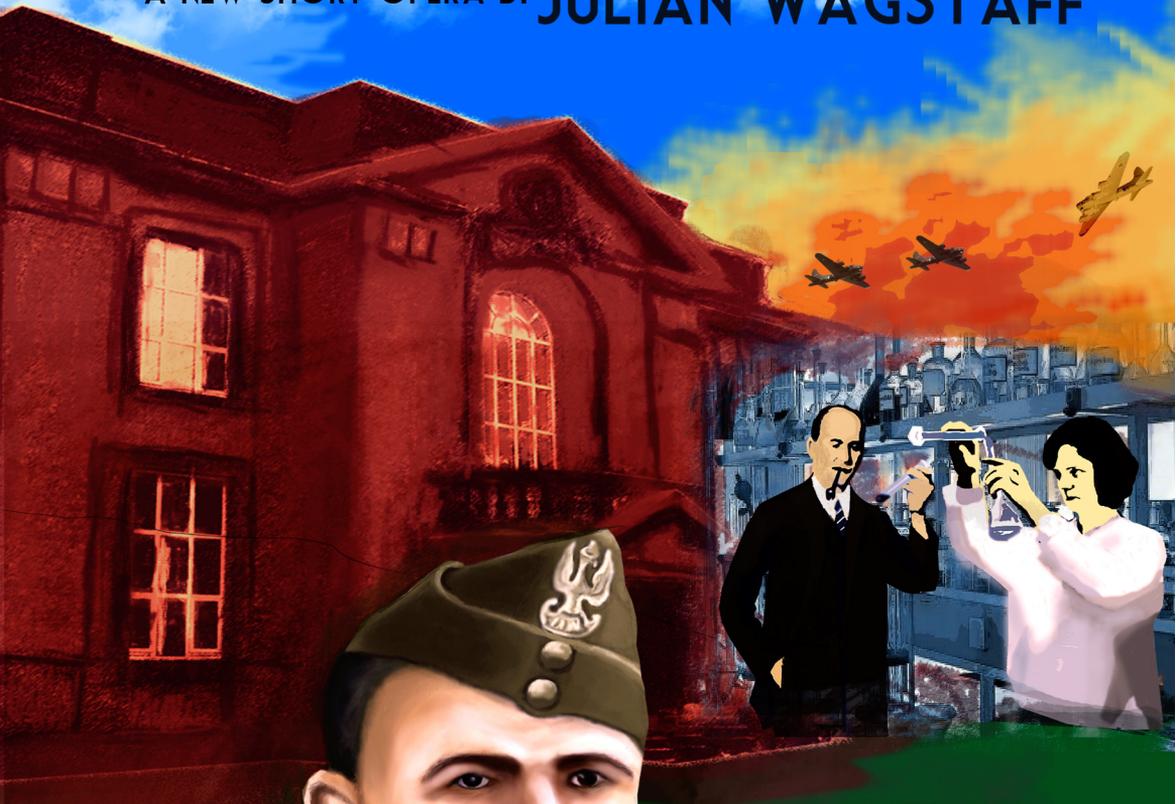


BREATHE FREELY

A NEW SHORT OPERA BY JULIAN WAGSTAFF



SOUVENIR PROGRAMME

THURSDAY 24 OCTOBER 2013 AT 8.00PM
ASSEMBLY ROOMS, EDINBURGH



Commissioned by the University of Edinburgh as part of the School of Chemistry's Tercentenary celebrations 2013.

Supported by Scottish Opera.

THE HINRICHSSEN FOUNDATION



Graphic design by Justyna Wojcicka

Welcome

I would like to give a very warm welcome to everyone attending this evening's performance. This musical evening is one of the highlights of our year-long celebration of the 300th Anniversary of the appointment of the first Chair of Chemistry at the University of Edinburgh.

It has been made possible by the efforts of many people and I would like to thank all of them, particularly our composer and librettist Julian Wagstaff and the staff of Scottish Opera. It has been a great experience for us to interact closely with Julian on this project throughout the year, illuminating a very interesting period in our long history.

Although an opera may seem an unusual way to celebrate chemistry, I am certain that it will prove to be a wonderful legacy of our celebratory year.

A handwritten signature in blue ink, appearing to read 'E.E. Campbell', written in a cursive style.

Eleanor E.B. Campbell FRS, CorrFRSE
Chair of Chemistry
University of Edinburgh

BREATHE FREELY

a new chamber opera in two short acts -
words and music by Julian Wagstaff

Commissioned by the University of Edinburgh School of Chemistry
to celebrate their Tercentenary year 2013
Supported by Scottish Opera

Tonight's concert will open with a performance of Julian Wagstaff's piano trio
A Persistent Illusion

Commissioned in 2011 by the Royal Society of Chemistry (Local Section)

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A Persistent Illusion

Trio for clarinet, cello and piano

by Julian Wagstaff

Pete Furniss (clarinet)

Su-a Lee (cello)

Andrew Johnston (piano)

This work was commissioned by the Royal Society of Chemistry (Edinburgh and SE Scotland Local Section) in 2011 to celebrate International Year of Chemistry that year. It was in the context of this commission that I first became associated with the School of Chemistry at Edinburgh University, which in turn led to the commissioning of the *Breathe Freely* opera, which we shall hear later on this evening.

My brief in writing the piano trio was that it should celebrate the past, present and future of chemistry in this part of Scotland. The title refers to Einstein's observation that the distinction between the past, present and future is merely a "stubbornly persistent illusion".

The work itself is in three movements, none of which have titles:

The first is an imagined three-way dialogue between Alexander Crum Brown (1838-1922), a professor of chemistry at Edinburgh University and a pioneer in the diagrammatic representation of compounds, the Russian composer/chemist Alexander Borodin (1833-1887) and the chemist Joseph Black (1728-1799), who had discovered carbon dioxide a century before. The motif recalls the opening movement of Borodin's cello sonata.

The second movement (of which the first section is essentially twelve-tone while the latter section essentially tonal) represents the process of chemical crystallisation, with the piano crystallising chords from the notes carried by the other two instruments.

The third movement derives from my workshops with school pupils and teachers in Edinburgh schools. Participants were asked to produce note patterns on manuscript paper inspired by their knowledge of chemical structures and formulae, and everything in this movement is derived from these ideas (including the "twelve-bar blues" section at the end of the movement). I tried to capture something of the exuberance and fun that I encountered in the classroom, as well as deeper considerations regarding the nature of our world.

The pupils and staff of Balerno High School and Gracemount High School who participated in the workshops contributed ideas that informed the final movement of my piece, and they may all properly be considered contributors to this work.

Breathe Freely

A chamber opera in two short acts

Words and music by Julian Wagstaff

Breathe Freely! was a book written in 1938 by Professor James Kendall FRS, head of the Department of Chemistry of Edinburgh University. Aimed at the general reader, the book sought to reassure the public that the dangers of poison gas had been greatly exaggerated and that – as long as one followed the common-sense instructions issued by the government – one had very little to fear...

The Cast (in order of appearance)

Professor James Kendall

Head of the Department of Chemistry, an expert in gas warfare

Phil Gault
(baritone)

Lieutenant Dr Stanislaw Hempel

A Polish chemist and military officer

Nigel Robson
(tenor)

Dr Christina 'Chrissie' Miller

Senior lecturer in Chemistry and a leading chemical researcher

Laura Margaret Smith
(mezzo-soprano)

The Musicians

Clarinet

Pete Furniss

Cello

Su-a Lee

Piano

Andrew Johnston

Production Team

Conductor / Musical Director

Derek Clark

Director

Omar Shahryar

Technical Manager

David Pammenter

Repetiteur

Silviya Mihaylova

Produced by Julian Wagstaff for
Edinburgh University School of Chemistry
Supported by Scottish Opera

www.chemistryopera.co.uk

Breathe Freely – Plot Synopsis

Act I

It is 1943, and Britain is at war. Professor James Kendall, Head of Chemistry at the University of Edinburgh, enters his office in the Joseph Black Building to make a telephone call. He calls Dr. Mowbray Ritchie (a fellow chemist who is also attached to Britain's Special Operations Executive, the forerunner of today's MI6).

Kendall tells Ritchie that he is expecting a visit from a Polish military officer named Stanisław Hempel. (Hempel, also a doctor of chemistry, is a serving lieutenant in the Polish Armed Forces in the West, stationed in Scotland). We hear that Hempel has an interesting and colourful past.

Hempel arrives, and tells of an uncomfortable train journey up to Edinburgh from London. Kendall sympathises, but suggests that Hempel has suffered far worse things in his life. Kendall welcomes Hempel to the Chemistry Department, jokingly referring to it as 'The Jam Factory', as the building was nicknamed at the time.

Hempel tells Kendall of Poland's suffering under Nazi occupation, including the plight of scientists arrested and dying in labour camps. ("Our science is to be destroyed, and our scientists with it"). He says that in Scotland there is hope, that here Polish people can train to fight, but also keep Polish science alive through study. Hempel says that Kendall understands the link between science and war better than most (Kendall being a well-known expert in gas warfare).

Hempel says he wishes to study chemistry at Edinburgh University. Kendall replies that study and knowledge are insufficient in times of war, and that scientific knowledge must be put to use ("study and fight!").

Dr Chrissie Miller enters, and complains to Kendall about equipment shortages affecting her work. She has set up a laboratory under the auspices of the Ministry of War to detect poison gases "in the smallest of measures". "There are problems with the ferrules", she tells him. Miller hopes that Kendall's connections can help to "lubricate supply". Kendall says he will do what he can to help.

Kendall introduces Miller to Hempel. Miller says she has never met anyone from Poland before, and asks Hempel if the language is similar to German. Somewhat indignant, Hempel answers in the negative. Miller explains that when she came to Edinburgh to study chemistry she was told to first learn German. She sings of her experiences learning the German language ("*der kleine Hund*"), and how strange it is that the people whose nursery rhymes she learned are now her deadly enemies.

Kendall congratulates Miller on her "immaculate and flawless" work to detect poison gases – "all known gases deployed in war". "But what about the unknown ones?" he asks. Miller replies that before the war Kendall had written (in his book *Breathe Freely!*) that "there would be no new dangers", and that all viable poisonous substances had already been discovered. Kendall replies that opinions must change along with the facts. "We suspect the Nazis have a gas as yet unknown to us", Kendall says. Echoing Winston Churchill, he says that the allies must be ready to respond to every eventuality. The three characters praise their respective visions of science, and its role in human progress.

Kendall entrusts Hempel, together with a small team of chemists, with the work of producing a substance that can be used in retaliation against any German attack using their suspected new gas.

He then telephones Ritchie, as promised, to keep him informed of developments, as Act I ends.

Act II

It is 1945, two years later, in the evening. Stanisław Hempel is discovered in his Edinburgh laboratory. He is reminiscing about his youth, and about his time in the militant Combat Organization of the Polish Socialist Party (*Polska Partia Socjalistyczna*, PPS). He recalls a political assassination he took part in against the forces of the Russian occupation, in which a local police chief was killed. Now an older man, Hempel reflects that even though the victim of the assassination was an enemy, guilty of great cruelty, he was also a human being with a past, a childhood and a life which was snuffed out in an instant (“a light goes out”).

Miller enters and catches Hempel in the midst of his reminiscences. She is shocked to learn that a man “so full of warmth, charm, humanity” such as Hempel could be guilty of killing another human being. Hempel responds that as scientists involved in the war effort they are all killers, whether directly or indirectly. Miller retorts that her gas detection work is purely defensive, purely protective. Hempel counters that in war there is no such thing as purely defensive work – all such work aims to bring victory closer, to “better kill the enemy”. “None of us are innocent”, says Hempel, “we cannot wash our hands”.

Miller does not understand how Hempel can express no regret for the actions of his younger self. Hempel responds by saying that “to live is to regret”:

“Show me a man with no regrets / and I’ll show you a man who has not lived
Show me a man with no regrets / and I’ll show you a man who has not loved
If you love freedom as I do / you must be prepared to die for it
And sometimes, yes, to kill for it

...

We may kill with a gun in our hand
Or with a drop of poison
Or just through our consent
To be on a given side”

Kendall enters the lab and asks Hempel what progress he has made in isolating the new compound he is striving to discover. Hempel replies that the discovery is still proving elusive, but that he expects to have important news by the morning.

Kendall states that the “powers that be are anxious”. The Allies fear that the Nazis, in their desperation as defeat draws near, may use their secret poisonous gas (their “secret gift”) in a last-ditch attempt to turn the tide of the war. Kendall repeats his conviction that the Allies must be ready to respond in kind to such a turn of events. Miller pronounces his statement “terrifying”.

At this moment, Kendall, Miller and Hempel hear distant noises which sound like “laughter, mirth and celebration”. They switch the radio on to hear what news there may be, and discover that the war has ended with the unconditional surrender of Nazi Germany. Kendall suggests that they celebrate the news with a glass of Scotch whisky, and the other two accept the invitation with token resistance.

Hempel, Kendall and Miller speak of what they will do now the war is over. Hempel will return to his home, “free Poland”, where he will “bathe in the Baltic and holiday in Zakopane”. Miller will “walk to Portobello and stroll along the sand”. Kendall stresses that they can all now “breathe freely once more”, and the others echo his sentiment.

Hempel asks Kendall what will happen to the secret work he has been engaged on for two years. Kendall says that, while the details of the work will be erased from the record, it has not been in vain, as no scientific work is ever truly lost.

Kendall telephones Ritchie to give him a final report, as the opera ends.

Who was Stanisław Hempel?

Stanisław Hempel was a Polish independence fighter, socialist activist and chemist. In 1904 he joined the Polish Socialist Party (*Polska Partia Socjalistyczna*, PPS), whose programme included national independence and a democratic system of government. After his release from military service, he was admitted into the Combat Organization of the PPS in 1906, taking part in the assassination of Colonel von Plotto of the gendarmerie in Radom. In 1943 Hempel reached Scotland, where he contacted Prof James Kendall of the University of Edinburgh School of Chemistry, and was granted a largely independent laboratory. This laboratory formed the basis of the Chemical Research Section of the Military Technical Institute of the Polish Armed Forces in the West, in which Hempel directed the work of a team of seven Polish chemists. He returned to Poland in 1947 and was active in the Polish Chemical Society, organizing conferences and seminars.



Picture courtesy of Wojciech Hempel

Michał Kochman (abridged JW)

Who was James Kendall?

James Pickering Kendall was an English chemist. He studied at Edinburgh, graduating in 1910. In 1912, supported by a scholarship, he left for the Nobel Institute for Physical Chemistry in Stockholm to work with Arrhenius on electrolytes. In 1913 he accepted the position as Professor of Chemistry at Columbia University, New York, also serving as a Lieutenant Commander in the United States Naval Reserve, acting as Liaison Officer with Allied Services on Chemical Warfare. In 1926 he was appointed Professor of Chemistry at New York University pending a final move back to Scotland to take up the post of Professor of Chemistry at Edinburgh University. In 1938 Kendall was invited to deliver the Royal Institution Christmas Lecture on Young Chemists and Great Discoveries, and in the same year published his book *Breathe Freely!* After many years of service to the Royal Society of Edinburgh he was appointed to the post of President in 1949. He retired ten years later, dying in Edinburgh in 1978.



Who was Chrissie Miller?

Christina Cruickshank Miller was born in Coatbridge in 1899. She contracted measles and rubella as a child, which progressively and severely damaged her hearing. A magazine article suggesting industrial analytical chemistry as a career for girls led to her choice of study. She was so impressed by Professor Sir James Walker that she greatly desired to work under his direction at the University of Edinburgh. He told her to learn German, and she mastered the language during her daily train journeys between Edinburgh and her home in Kirkcaldy. In 1921-24 she worked under Sir James on diffusion in solution, testing the validity of the Stokes-Einstein Law. Miller graduated DSc (at the age of 29) for her work on phosphorous trioxide and was granted a lectureship with tenure at Edinburgh University. During World War II she prepared and equipped a laboratory for the rapid detection of war gases and analysed numerous materials for the War Department. Her standing was recognised in 1949, when she was the only chemist among the first five women elected to Fellowship of the Royal Society of Edinburgh.



Writer's Note

The inescapable challenge, the inescapable question when writing a dramatic work based on historical characters and historical events (and operas are dramatic works *par excellence*), is how much *history* and how much *story* there should be in the mix. It has been said, correctly, that “God does not write good theatre”. Life events, the things we do and the things that happen to us, do not conform to tried-and tested models of story arc, climax, dénouement etc. Thus it is the task of the dramatist or librettist (myself in this case), to mould a satisfying dramatic story from the known facts, using embellishment, inference, and imagination in appropriate measure.

The challenge is particularly acute when one is writing about the (relatively) recent past, as is the case with *Breathe Freely*. The challenge is heightened further when at least two of the characters, James Kendall and Chrissie Miller, are still remembered fondly by people who may well be in the audience this evening! One must strike a balance between being true to the historical record and one's own impression of the actual historical figures themselves, and producing an engaging work of music theatre which will appeal to a broad audience – including the vast majority who never knew Kendall or Miller.

Thus, although I conducted extensive interviews with living people who knew all of the three main characters in *Breathe Freely* when they lived, and read most (if not all) of the available literature on them, there **will always be a distinction** between the historical figures and the characters in the opera, between the “real” Kendall and “my” Kendall, between the “real” Chrissie and “my” Chrissie. The two must not be confused. In the introduction to his play *Copenhagen*, the playwright Michael Frayn makes precisely this point in relation to his portrayal of Nils Bohr's wife Margarethe: “his” [Frayn's] Margarethe is a **different entity** from the actual person who died in 1984.

When Judith Salters pointed me towards Michal Kochman's excellent summary of the life of Stanisław Hempel, a Polish chemist, military lieutenant and former socialist revolutionary who came to Edinburgh in 1943 and was given a laboratory by Prof. James Kendall, I was immediately hooked. Why had Hempel come to Edinburgh? Perhaps because Kendall was an acknowledged expert on wartime applications of chemical substances. What was Hempel actually doing during the years he spent at Edinburgh? Officially, he was writing a PhD on gas flow rates in closed systems, under Kendall's supervision. But he already had a PhD, so why did he need another one? (I have seen Hempel's Edinburgh thesis and it is a very, very slim volume indeed). Hempel's second supervisor was Mowbray Ritchie, who we know was attached to the Special Operations Executive, a forerunner of today's MI6...

What was Hempel *actually* doing in Edinburgh, attached to the Polish Armed Forces in the West, between 1943 and 1945? The fact is we may never know. Edinburgh University's Special Collections department have been unable to shed any light on the subject, despite great efforts, and nor have the National Archives in Kew.

Until documents come to light proving the contrary, *Breathe Freely* must serve as my best guess. I hope, with all my heart, that you enjoy it!

Director's Note

Julian Wagstaff's opera *Breathe Freely* is a manifold celebration of human endeavour, history, interest, compassion, and of course, chemistry at Edinburgh University. It recounts the semi-fictional story of several real and extraordinary chemists who were drawn into the world of Edinburgh's Chemistry Department, or "The Jam Factory", between 1943 and 1945, and who helped to make it the extraordinary institution it is today.

With Stanisław Hempel's arrival, Wagstaff's story aptly highlights the department's acclaimed international standing, as well as Scotland's role in welcoming and re-energising the beleaguered Polish people. Scotland went out of her way to provide resources and institutions for the Polish resistance to recover its strength and regain their country (including, amongst many others, the Polish School of Medicine in Edinburgh, military and engineering schools etc.). Yet Wagstaff has created something of a humble fanfare, illuminated by the humility of the protagonists themselves, who worked away discreetly; passionately finding solutions (if you'll pardon the pun) to society's chemical problems with a selfless sense of mission. Wagstaff has expertly managed to blow their trumpets both as much as they deserve, and as much as they would feel comfortable with.

The title *Breathe Freely* is taken from Professor James Kendall's book of the same name, written in 1938 to inform and reassure the general public about the dangers posed by chemical warfare in the tense and frightening build up to WWII. Professor Kendall's book makes fascinating reading, as we can see what has changed and what has stayed the same since the time of its writing. The book clearly encapsulates the state of mind of pre-war Britain as she begrudgingly re-militarised, though Professor Kendall repeatedly tries to reassure his readers that Germany could not really be silly enough to try to start a war. Similarly, he makes the case that all of the known chemical weapons would not be very effective as a lethal measure a second time around, now that everyone knew how to protect against them. In hindsight, of course, we know how Hitler deftly manipulated the world. We know that Germany did indeed develop a more lethal poison gas, the nerve agent Sarin, which they never deployed during the war for fear that the Allies had it too. Nor could Professor Kendall have known in 1938 of the future development of the ultimate weapon, the nuclear bomb.

On one main point, however, Professor Kendall is still correct: people are more afraid of poison gas than they are of 'conventional' weapons, and mass fear can be manipulated. Therefore, he points out, gas is a very 'useful' weapon if you want to terrorise your opponent into submission, or if you want to justify intervention to your own populace. The current situation in Syria proves that still, the world is prepared to accept over a hundred thousand bomb and gun casualties, but not a few hundred deaths by gas.

On the possibly contentious point of science and ethics, Wagstaff has laudably chosen the romantic pragmatist Stanisław Hempel and the endearing perfectionist Chrissie Miller to openly debate this subject in the middle of his opera. It may be surprising to turn to this darker corner in what is a celebration of science, but frankly, where better to

celebrate the importance of human dialogue, and the reaching of mutual understanding for the betterment of mankind, than at the very institution that excels in such a thing? *Nec temere nec timide*, Edinburgh!

Indeed, it is human beings doing their best for the betterment of mankind, here at Edinburgh University, that is being celebrated in the opera *Breathe Freely*. The very fact that such a chemistry department would commission an opera reflects a humanistic breadth of spirit and openness of mind which would undoubtedly make Professor Kendall proud. We celebrate the myriad influences, circumstances, characters and elements that have combined to inspire thousands of young chemists who continue to make great discoveries for humanity. That is why, with this in mind, we can all afford to breathe freely.

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Biographies

Julian Wagstaff (Composer/Librettist/Producer)

Julian lives in his native Edinburgh where he is active as a composer, arranger and guitarist. He worked as a translator, television researcher and computer programmer before turning to music as a profession in the late 1990s. His interest in language, political history and the sciences continues to be reflected in much of his music and in his theatre libretti. He studied Composition at Edinburgh University with Professor Nigel Osborne, receiving his PhD in 2008.



Photo © Kat Zgierska

The composer first came to public attention in 2001 with the musical *John Paul Jones*, based on the life of the Scots-born sailor and hero of the American Revolution. The musical was revived in 2010 in association with the Scottish Chamber Orchestra.

Julian's specific interest in German history is reflected in *Treptow* for string orchestra (2005), his most-performed work. His Piano Quintet was released on Circular Records in November 2007 on an album entitled *Frontiers and Bridges*, performed by the Edinburgh Quartet and produced by Calum Malcolm. In August 2007, Julian Wagstaff presented his hour-long chamber opera *The Turing Test* on the Edinburgh Festival Fringe, to sell-out audiences and critical acclaim. The opera was cited by the novelist Alexander McCall Smith as his cultural highlight of the year in the *Daily Telegraph* Review of the year.

In 2011, Julian was commissioned by the Royal Society of Chemistry to compose a new trio to celebrate International Year of Chemistry. The work, entitled *A Persistent Illusion*, was premiered by Hebrides Ensemble in the same year. Julian enjoys close connections with many of Scotland's leading musicians, and his works are widely performed throughout Scotland and beyond. He is currently serving as Composer in Residence in the School of Chemistry, University of Edinburgh. He is published by Europa Edition

More information and sound clips are available at www.julianwagstaff.com.

Derek Clark (conductor / musical director)

Derek Clark was born in Glasgow and studied at the RSAMD, Durham University and the London Opera Centre. He joined the music staff of Welsh National Opera in 1977 as a répétiteur, making his conducting debut in 1982 and going on to conduct a wide variety of opera for them, ranging from Monteverdi to Maxwell Davies. He joined Scottish Opera as Head of Music in 1997, and since then has conducted *Samson*, *The Magic Flute*, *Don Giovanni*, *The Marriage of Figaro*, *Così fan tutte*, *The Barber of Seville*, *The Italian Girl in Algiers*, *Fidelio*, *La Traviata*, *Rigoletto*, *Falstaff*, *Orpheus in the Underworld*, *Carmen*, *Manon*, *Tosca*, *Madama Butterfly*, *La Bohème*, *Eugene Onegin*, *Hansel and Gretel*, *Ines de Castro* and *Clemency* (James Macmillan), *The Lady from the Sea* (Craig Armstrong), all three seasons of the



Five:15 series and, most recently, *The Pirates of Penzance*. He has also re-orchestrated *Hansel and Gretel*, *La Cenerentola*, *die Fledermaus*, *Carmen* and *Rodelinda* for Scottish Opera touring productions and has arranged the music for the highly successful 'A little bit of...' series run by Scottish Opera's Education Department. Elsewhere he conducted Rory Boyle's award-winning *Kaspar Hauser: Child of Europe* for the RSAMD, has assisted Sir Roger Norrington at the EIF and also works as a guest coach, accompanist and composer. Since 2011 he has been Music Director of Dundee Choral Union.

Omar Shahryar (director)

Born in Saudi Arabia and of mixed Scottish-Bangladeshi heritage, Omar Shahryar made his professional directorial debut with *Amahl and the Night Visitors* for St Albans Chamber Opera in 2009, after which he directed the Glyndebourne Youth Opera 12-14 yr olds' group for several years. He has directed a work-in-progress tour of a new chamber opera, *The Lion's Face* by Lena Langer, for The Opera Group, as well as the University of York's production of Britten's *Paul Bunyan*, and co-directed Weill's *The Tsar Has His Photograph Taken* with Viriditas Opera.



Omar has worked as an assistant director with Royal Opera, ENO, Birmingham Opera, Grange Park, Garsington, Opera North and Mahogany Opera. Omar also composes music theatre and opera. He is currently writing a new musical, *Nicola* (with Hatstand Productions), as well as a two-act chamber opera, *Soon Upon A Time* in association with Rose Bruford College of Theatre and Performance.

Omar runs a his own creative outreach project, Opera Schmopera, and leads workshops for Royal Opera, Glyndebourne, Opera North, Streetwise Opera, Create Arts and Pegasus Opera.

Omar has a Masters degree (with Distinction) and a Bachelors degree (1st Class with Honours) in Music from the University of York, where he specialised in the composition of opera and music theatre.

Laura Margaret Smith (mezzo-soprano)

Scottish mezzo-soprano Laura Margaret Smith recently received the 'Making Music' Award for Young Concert Artists 2013-2015, and will be making her début at St. Martin-in-the-Fields in January 2014.

Laura recently completed her studies at the Royal Conservatoire of Scotland under Clare Shearer, and is very grateful to the support of the EMI Music Sound Foundation and the RCS, Caird, Cross and South Square trusts. Laura also holds an MBF Postgraduate Performance Award. During her studies Laura sang the roles of Hermia, A



Midsummer Night's Dream in co-production with Scottish Opera, *Ottavia*, *L'Incoronazione di Poppea*, *Lucretia*, *The Rape of Lucretia*, *Duenna*, *Betrothal in a Monastery* (cover) and *Florence Pike*, *Albert Herring*, and in May 2012, she sang the title role in *Carmen* with Edinburgh Grand Opera.

Laura was awarded a place on the Solti Accademia di Bel Canto this summer and had the privilege of working with Dennis O'Neill, Richard Bonyngne, Luciana Serra and Daniela Dessi. A Samling scholar and Britten-Pears Young Artist, Laura has worked with Sir Thomas Allen, Roger Vignoles, Ann Murray DBE and Ian Partridge. In masterclasses, she has sung for Dame Felicity Palmer, Elly Ameling, Jane Eaglen, Lisa Milne, James Gilchrist and Malcolm Martineau. Following her success in the Frank Spedding Lieder Prize, Laura had the opportunity to sing for Florian Boesch at the City Halls, Glasgow.

Winner of the Florence Veitch Ibler prize for Oratorio, Laura performs regularly around the country as a concert soloist, and most notably premiered a work by Ronald Corp at the Royal Festival Hall with the New London Orchestra. Laura also sang as soloist under Eric Whitacre with the Schleswig-Holstein Festival Choir in Germany earlier this year.

Nigel Robson (tenor)

Nigel Robson was born in Argyllshire and studied with Alexander Young and Gustave Sacher. He is well established as one of Britain's most versatile lyric tenors with an operatic and concert repertoire ranging from Monteverdi to the most contemporary of compositions, and is particularly well known for his interpretations of Britten. In 2010 he enjoyed a huge success in *Idomeneo* for La Monnaie, with English Touring Opera in Goehr's *Promised End* and also performed in a staging of Bernstein's *Mass* in Munich. Most recently he was in a production of *Ulysses* for English National Opera at The Young Vic in London, as well as taking on the role of Sacerdote/*Idomeneo* for the Théâtre des Champs-Élysées, and *Arbace/Idomeneo* for Grange Park Opera.



Other operatic engagements have included *Bajazet/Tamerlano* in Drottningholm; the title role in *Peter Grimes* for the Nationale Reisopera in Holland; *Captain Vere/Billy Budd* for the Canadian Opera Company; *The Witch/Hansel and Gretel*; *Laca/Jenufa* and *Captain Vere/Billy Budd* for Welsh National Opera; the title role in *Il Ritorno d'Ulisse in Patria* in Lisbon and for Opera North; the title role in *Idomeneo* at the Bayerische Staatsoper in Munich; *Male Chorus/The Rape of Lucretia* at the Grand Théâtre de Tours; *Pandarus/Troilus and Cressida* for Opera North and *Septimius/Theodora* for Glyndebourne.

Concert appearances have included *Maderna's Venetian Journal* with Peter Eötvös in Amsterdam; *Judas Maccabeus* in Berlin; *Jephtha* with the Orchestra of the Age of Enlightenment; Britten's *Spring Symphony* with the Rotterdam Philharmonic; Stravinsky's *Renard* in Paris with Sir Simon Rattle; *Das Lied von der Erde* with the BBC

National Orchestra of Wales and Britten's *War Requiem* in St Petersburg, Prague, Tel Aviv and Madrid.

He premiered a project entitled *The Tenor Man's Story*, which is very close to his own life and opened the 2005 Enschede Festival in Holland. The form of the work is a multimedia recital with integrated audio and visual projections using the works of Britten, Dufay, Cage and the Beatles, as well as piano improvisations by Howard Moody and audio compositions of his own.

Nigel Robson's recordings include Handel's *Tamerlano*, *Jephtha* and *Alexander's Feast* (Gardiner/Phillips Classics); Monteverdi's *Orfeo*, *Poppea* and *Vespers 1610* (Gardiner/Deutsche Grammophon Archiv); Tippett's *Songs for Dov* (Tippett, Scottish Chamber Orchestra/Virgin Classics); Stravinsky's *Renard* (Rattle/Sony Classics); Mozart's *Idomeneo/Arbace* (Gardiner/Deutsche Grammophon Archiv); Britten's *The Rape of Lucretia*/Male Chorus (Hickox/Chandos Records); Walton's *Troilus and Cressida*/Pandarus (Hickox/Chandos Records); Delius' *Mass of Life* (Hickox/Chandos Records); Janacek *Jenufa*/Laca (Sir Charles Mackerras/Chandos), and a dramatic TV film of Britten's *Abraham and Isaac* for Dutch TV directed by Pierre Audi.

Phil Gault (baritone)

Welsh baritone Phil Gault studied at St Catherine's College, Oxford, and at the Royal Scottish Academy of Music and Drama with Alan Watt before studying privately with Patricia MacMahon and Paul Farrington. He has recently returned from a tour of Wales performing the title roles for Opra Cymru in both Verdi's *Macbeth*, in a new Welsh-language production (for which he was nominated for Best Male Opera Singer at the Theatre Critics of Wales Awards), and Rossini's *Barbar Sefil*.



He has also performed with Scottish Opera, Buxton Festival Opera, and Northampton Festival Opera, is principal baritone for Opera on a Shoestring, co-founded Black Sheep Opera, and is a Samling and a Crear scholar. Other rôles include Don Giovanni, King Roger, Nabucco, Tarquinius, Il Conte (*Le Nozze di Figaro*) Dandini, Junius, NickShadow, Escamillo, Morales, El Dancaïro, and Chao Lin (*A Night at the Chinese Opera*).

Phil has performed recitals in the Usher Hall, the Wales Millennium Centre, the Riverfront Centre and Paxton House, and is an aLuMNus of Yehudi Menuhin's Live Music Now! scheme. His song repertoire includes *Dichterliebe*, *Chansons Gaillardes*, *Songs of Travel*, *Italienisches Liederbuch*, and *A Shropshire Lad*, and his oratorio repertoire ranges from *Carmina Burana* and *A Sea Symphony* to the Bach Passions and cantatas, in venues from the Glasgow Royal Concert Hall and the Usher Hall, to the Sheldonian Theatre, Oxford.

Recordings include a CD of Philip Wilby's music for Naxos with the Black Dyke Band, Wilby's *Bronte Mass* with Black Dyke and the London Bach Choir under David Hill, Caldwell for Guild records, and a CD by the Scottish composer Robin Downie.

Pete Furniss (clarinet)

Pete Furniss performs widely as a clarinetist, improviser and educator, and has worked with many of the UK's ensembles and orchestras. He has also given electro-instrumental performances internationally with Richard Dudas, Martin Parker and others. In 2013, he collaborated with Alex Harker on a remix for clarinet and electronics of Steve Reich's *New York Counterpoint*, which they performed at the Glasgow Royal Concert Hall in the presence of the composer.



A member of Not So Silent Movies, Edimpro and Impropera, Pete has improvised with the artists as varied as Evan Parker, Michael Edwards, London Improvisers' Orchestra and Evelyn Glennie, as well as Jarvis Cocker and members of Goldfrapp and Stereoeophonics. In May 2013 he was invited to play with Talvin Singh as part of his Alchemy Festival concert at the Royal Festival Hall, London.

Pete has collaborated on a huge number of education projects, including Stephen Deazley's Love Music, The DaCapo Music Foundation, Red Note, and SCO Connect's 'Vibe'. He is also a founding tutor, arranger and mentor for Edinburgh's revolutionary non-classical youth collective, Tinderbox Orchestra.

Following the award of a grant this year from the Arts and Humanities Research Council, Pete has recently begun a PhD programme at the University of Edinburgh, researching the widening interaction between musicians and electronic systems in live performance.

Su-a Lee (cello)

Korean born cellist Su-a Lee is one of the highlights of the Scottish music scene. Celebrated wherever she goes, she stands out for her versatility, popularity, and appetite for musical adventure.



Born in Seoul, Su-a trained at Chethams School of Music, completing her studies at the Juilliard School in New York. On graduating with her degree, Su-a moved to Scotland, to join the Scottish Chamber Orchestra, where she remains as Assistant Principal Cello. While she is deeply rooted in her Scottish home, Su-a and her cello have appeared all over the world, from South America to the Arctic Circle. As well as performing in the world's major concert halls, you are likely to find them in unorthodox and interesting locations, including Japanese temples, circus tents and waterfalls.

With the SCO, Su-a performs regular classical music concerts throughout the year and throughout Scotland, as well as making international tours. As an SCO member for

almost 20 years, Su-a has recorded many award-winning classical music discs with among others, Sir Charles Mackerras, Alfred Brendel, Robin Ticciati, Joseph Swensen, and Alexander Janiczek. She has appeared in recital with her sister, Songa Lee, at Carnegie Hall in New York, as well as in chamber music concerts across Scotland with her SCO colleagues.

The range of her non classical work has encompassed recording on her musical saw for Eric Clapton, performing at Celtic Connections with Jack Bruce of Cream and the folk band Lau, to improvisatory work with the Belgian Theatre group Reckless Sleepers, and a tour of India with the Sarod maestro, Amjad Ali Khan. In 2013 she was invited to become a member of India Alba, after performing with them at Celtic Connections, Solas and Insider Festivals.

Su-a is also a founder member of the innovative music ensemble Mr McFall's Chamber. Beginning in 1996 by playing avant-garde string quartet music in late-night club venues, the group have grown to encompass an eclectic range of different traditions. You will find them playing diverse repertoire from cartoon classics, through progressive rock, to jazz, tango nuevo and folk. Their popular recordings include the music of late Celtic fusion pioneer, Martyn Bennett, a disc with Norwegian electronic jazz percussionist Thomas Strønen, and a recording of the works of the idiosyncratic Dundee poet and songwriter, Michael Marra. They remain an important commissioning stimulus, developing musical talent throughout Scotland.

Su-a Lee is an Associate Member of the Martyn Bennett Trust, and a Trustee of the Board of the Soundhouse Trust.

Andrew Johnston (Piano)

Andrew Johnston has performed as a chamber musician and soloist in Britain and abroad, including concerto performances of Tchaikovsky Piano Concerto no. 1, Grieg Piano Concerto and Beethoven Piano Concerto in Kiev. He gained his Masters Degree in Musicology in 2006 from the University of Edinburgh, and has participated in masterclasses with Norma Fisher, Berndt Goetzke, Leon McCawley, Radoslav Kvapil, Yonty Solomon, Martimo Tirimo and others.



In 2007 he gave a recital and masterclass in Latvia as part of a course on piano pedagogy, and in 2009 and 2010 he was on the faculty of the Chetham's International Piano Summer School. He performs regularly with ensembles such as the Edinburgh Quartet, Rose Street Quartet and the Calton Consort, and recently performed Rachmaninov Piano Concerto no.2 with the Edinburgh Charity Orchestra.

Last summer he performed Liszt's Piano Sonata in B minor at the Cathedral of the Isles, before touring a variety of music societies around Scotland and England with duo partner Jessica Beeston (viola) in the autumn. Andrew will soon be performing Stravinsky's Capriccio for Piano and Orchestra, in addition to a number of other solo and chamber music engagements.

Acknowledgements

Reading back through email correspondence since March 2013, I have been struck by the sheer number of people who have helped me to bring *Breathe Freely* into being and onto the stage. All opera is a collaborative process, but this one seems to have been particularly so! In no particular order, and assuming all responsibility for any errors and omissions, I would like to thank the following people for all their help, without which this evening's concert would not be taking place in its present form, or even at all.

I would like to thank current students of the School of Chemistry at Edinburgh University for their encouragement, help, ideas, support and site tours, including Hannah Johnston, Callum Idle, Giulia Sebastio, Victoria Camus, Kirsten Strain, Fergus McWhinnie and Andrew Piper. Many members of staff have contributed ideas as well as practical and moral support, including Colin Pulham, Julien Michel, Andy Mount, Stuart Duncan, Jenny Bos, Polly Arnold, Simon Parsons, Ron Brown, Derek Wann, Louise Hogg, Sigita Raceviciute and others. I am particularly grateful to Perdita Barran, Philip Bailey and Colin Campbell for allowing me to attend their lectures and seminars in the early stages of the project, as I struggled to find my way into the fascinating (and sometimes bewildering) world that is modern chemistry. Special thanks are due to Andy Alexander, whose extensive knowledge of the history of the School was of immense help in honing the story of the opera, and to Mark de Vries, who shared a number of scientific insights with me which have influenced the music of the opera.

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The original idea and inspiration for the opera was a piece of research about Polish chemists who came to Edinburgh during World War II, undertaken by Michal Kochman, currently a graduate student within the School of Chemistry. I am grateful to Judith Salters for pointing me in the direction of his work. Michal's summary started me off on a journey of research and discovery, which eventually resulted in the opera we shall hear this evening. Many people were key in assisting me in my historical research, most notably Ken Wilkie (who studied chemistry at Edinburgh in the late 1940s), but also Jim Ward, Ron Inglis, Alan Hagopian and Peter Schwarz, many of whom provided personal recollections of Chrissie Miller and James Kendall, the other two characters in the opera. I was delighted when Wojciech Hempel, the grandson of Stanisław Hempel (my lead character) responded via the Internet from Łódź in Poland to my request for help. He provided a wealth of first-hand information, including facsimiles of original correspondence from the 1940s between Hempel and Kendall! Lucas Rajczuk and others helped with translation, and the staff of Special Collections in the University Library (notably Grant Buttars) were also generous with their time and support.

Also at Edinburgh University, I am grateful to Catriona Kelly in the University press office and Catherine-Jane Cochran for helping to spread the word about the opera to the press, general public and the alumni community.

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A turning point in the *Breathe Freely* project was when Alex Reedijk, the General Director of Scottish Opera, offered to assist us in our venture. Scottish Opera's support has been tremendous, and has undoubtedly raised the level of ambition embodied in the project. I would like to thank everyone at Scottish Opera for their help, but in particular James Grossmith and Elaine Kidd (who practically single-handedly cast the show for me and provided my production team), Helen Ireland for help with press and PR matters, John Liddell and Mandy Bryan for costumes and Katie Poulter for props, also Iona Jack, Vivienne Wood, Jackie Whyte and Louise Smith. The entire project owes them an immense debt of gratitude.

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JW

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