



# in and out of the studio

<b>A PROPOS DU PROJECT</b>	<b>2</b>
<b>METHODOLOGIE</b>	<b>4</b>
<b>APROPOS DE NOUS</b>	<b>8</b>
<b>LES PARTICIPANTS</b>	
<b>Hildegard Westerkamp</b>	<b>10</b>
<b>Hélène Prévost</b>	<b>12</b>
<b>Nancy Tobin</b>	<b>20</b>
<b>Marian van der Zon</b>	<b>35</b>
<b>Shelley Craig</b>	<b>49</b>
<b>Diane Leboeuf</b>	<b>52</b>
<b>Past Participants</b>	<b>64</b>
<b>LIENS/INFO</b>	<b>71</b>

## **::A PROPOS DU PROJET::**

Le langage utilisé durant

# les discussions entre femmes à propos des technologies musicales

semblent souvent prendre au moins deux directions:

premièrement

envers le criticisme de la réalité du courant dominant  
et deuxièmement

envers la création imaginative des mondes féministes,

allant au dehors tout  
en écoutant à l'intérieur  
simultanément.

Une telle position pour les compositrices

(celle d'être à l'intérieur en même temps qu'à l'extérieur)

dans une culture qui définit la composition électroacoustique comme un rôle masculin, avec ses enjeux,  
peut aussi donner l'opportunité de considérer d'autres possibilités.

## **::HISTORIQUE DU PROJET::**

Le projet « En Dedans et dehors du studio » est dirigé par Dr. Andra McCartney et constitue un essai voulant explorer plus en profondeur les thèmes que cette dernière n'a pu aborder lors des recherches qu'elle a effectuées dans le cadre de sa maîtrise et de son doctorat. Au cours de son mémoire de maîtrise, Andra a interviewé quatorze femmes, toutes compositrices de musique électroacoustique.

À partir de ces entrevues, elle a publié plusieurs articles sur leurs méthodes de travail, leurs relations avec les institutions et leurs discours sur la technologie. Les compositrices ont participé au processus d'édition et ce projet a contribué à créer des affinités entre elles grâce à leur participation aux discussions et l'analyse de leurs idées et de leurs expériences. Suivant cette ligne de pensée, une partie de la présentation multimédia incluse dans la thèse de doctorat d'Andra est intitulée "In the Studio" (« Dans le studio »). Elle était basée sur une entrevue accordée par Hildegard Westerkamp - une compositrice et artiste du son de Vancouver - au sujet de la production d'une de ses créations récentes (« Gently Penetrating Beneath the Sounding Surfaces of Another Place »).

De plus, on retrouve aussi dans la présentation multimédia une section documentant le propre processus créatif d'Andra, faisant une installation sonore sur ordinateur à partir d'enregistrements recueillis lors d'une marche sonore. À partir de ces entretiens et discussions, on a pu élaborer certains thèmes théoriques, dont certains que vous trouverez à la suite de ce texte. Ce sont ces thèmes qui ont été utilisés comme point de départ dans le développement de ce projet. Lors de la présentation de ses recherches doctorales à des conférences académiques et de festivals des arts du son, Andra a remarqué que ses présentations multimédia sur les méthodes de travail avec le son semblaient très populaires auprès des producteurs et audio-artistes de la relève, et ce particulièrement chez les femmes qui apprécient son engagement avec la façon de travailler des artistes du son. « En dedans et dehors du studio » cherche à atteindre un public plus large.

### **::INTERPRETER / INCARER LE GENRE::**

Un thème récurrent dans les recherches mentionnées ci-haut est la notion d'interpréter (Butler 1990; Callaghan 1995): être un 'outsider' soit « comme une femme » ou comme « un compositeur » peut mener une compositrice électroacoustique à « jouer » à être la femme exceptionnelle, ou la femme stéréotypée et/ou la compositrice sans genre, l'experte technique, l'ingénieure de son, la technologue macho. Ce jeu de rôle peut permettre plus de flexibilité et de liberté dans la définition des rôles, si cela est une stratégie consciemment choisie. En même temps, ce n'est pas tous les rôles qui sont choisis librement. Quelquefois, une femme peut jouer ces rôles inconsciemment, les utilisant comme une défense, s'aliénant elle-même de parties de son expérience de vie. D'autres, ne voulant pas s'engager dans de telles performances, pourraient choisir d'autres voies. Sandstrom (2000) indiquent que différentes approches à la performance du genre existe aussi dans l'ingénierie du son. De plus, le contexte institutionnel (par exemple, travailler dans un studio traditionnel versus travailler pour un festival de musique par les/pour les femmes) affectent comment le genre est interprété. « En dedans et dehors du studio » comparera plusieurs contextes institutionnels pour mieux comprendre comment de ceux-ci affectent la performance du genre.

### **::STRATEGIES D'ENSEIGNEMENT ET D'APRENTISAGE::**

Le discours des compositrices interviewées qui a mené à ce projet, tant au niveau du langage que celui de la musique, suggère des conceptualisations et des désirs différents de ceux appartenant au courant dominant. Bien qu'il

n'est pas littéralement impossible pour une femme de composer de la musique électroacoustique, les femmes interviewées avant le projet « En dedans et dehors du studio » reportaient souvent un sentiment induit par cet environnement qui définit le compositeur électroacoustique comme étant un être masculin. Les femmes ne se voient pas l'entrée des studios et des cours de composition électroacoustique déniée. Déjà, plusieurs des compositrices interviewées se battaient pour faire leur place au sein des cours universitaires en musique électroacoustique, où certaines sentent fortement que leurs approches compositionnelles ne sont pas appréciées à leur juste valeur. Ceci est consistant avec des résultats de recherche trouvés dans d'autres domaines, comme celui des sciences informatiques. En même temps, peut-être que l'expérience quotidienne de la compositrice électroacoustique, contredisant l'image stéréotypée donnée par notre propre culture, encourage la productrice de la nécessité d'imaginer d'autres possibilités. Ce mouvement de balancier les mène, peut-être par sa précarité, à commencer à penser aux différentes façons d'interagir dans les communautés électroacoustique, du multimédia, des communications et de l'art de la sonorisation. L'importance de modèles visibles et audibles dans ces domaines a été soulignée par plusieurs collaborateurs.

### **A Distant Silence**

:: Écoutez "A Distant Silence", enregistrement et montage par Andrea-Jane Cornell et Owen Chapman durant le conférence "In and Out of the Sound Studio", 2005.... [564 kb](#) [2.2 MB](#)

### **Cut & Splice to Cut & Paste**

:: Écoutez "Cut & Splice to Cut & Paste" – une conversation au sujet du montage sonore avec Diane Ballon, enregistrement et montage par Andrea-Jane Cornell durant le conférence "In and Out of the Sound Studio", 2005.... [Part 1 \[6.2mb\]](#) [Part 2 \[6.7mb\]](#) [Part 3 \[6.6mb\]](#)

### **Création radiophonique avec Chantal Dumas**

:: Écoutez "Radiophonic Creation - a talk with Chantal Dumas", enregistrement et montage par Andrea-Jane Cornell durant le conférence "In and Out of the Sound Studio", 2005.... [Part 1 \[6.4mb\]](#) [Part 2 \[6.5mb\]](#) [Part 3 \[7.5mb\]](#)

### **::ORGANIZATIONS PARTICIPANT::**

[www.studioxx.org](http://www.studioxx.org) (Studo XX Montreal)

[www.fmok.org](http://www.fmok.org) (full moon over Killaloe)

[www.trentu.ca/TrentRadio](http://www.trentu.ca/TrentRadio) (Trent University Radio)

[www.westernfront.bc.ca](http://www.westernfront.bc.ca) (Western Front Gallery)

## **::METHODOLOGIE::**

### **::LES MÉTHODES DE TRAVAILLE::**

"In the Studio" est basé sur une entrevue donnée par Hildegard Westerkamp au sujet de la production de « Penetrating Beneath the Sounding Surfaces of Another Place », un travail effectué à partir d'enregistrements qu'elle a fait du paysage sonore de New Delhi en Inde au début des années 1990. « In the Studio » permet à l'utilisateur d'entendre des fichiers sonores individuels de

#### **○ year one**

- a) Workshops in Montreal, Killaloe and Vancouver.
- b) Initial interviews with women sound producers.

#### **○ year two**

- a) Continuation of interviews.
- b) Transcription and analysis of interviews and workshop sessions.

#### **○ year three**

- a) Completion of transcription and analysis of ethnographic research.
- b) Editing process with participants.
- c) Multimedia production. Correspondance with participants and web design will be going on throughout.

cette pièce, de lire une discussion à propos de la façon dont Westerkamp a créé ces sons, et d'entendre ces sons extraits de la pièce complète avec une partition à suivre en même temps que l'écoute. En plus de tout cela, il est possible de regarder des photographies de l'endroit où s'est déroulé l'enregistrement et de lire un texte sur l'approche utilisé par Westerkamp pour la composition avec les technologies sonores. Une autre partie du travail de doctorat d'Andra présentent aux visiteurs des informations sur la composition par Andra d'une présentation multimédia basée sur une marche sonore avec Westerkamp. Dans les deux cas, l'audience est introduite aux méthodes de travail spécifiques utilisées à travers les partitions, des exemples sonores et une discussion écrite et illustrée.

### **::QUESTIONS OUVERTES::**

L'approche utilisée pour rassembler les informations de cette recherche sera de type "auto-réflexion" et mettra l'emphase sur les questions ouvertes. Le but sera d'encourager les participants à raconter des histoires à propos de leurs vies professionnelles plutôt que de répondre à des questions

spécifiques. Il est possible d'envisager que cela mènera à la considération de thèmes et de questions qui n'auraient pas été imaginés sans cette approche. Aussi, à la suite du travail important effectué par Karen Pegley (2000), les participants seront aussi encouragés à parler de leurs expériences avec les technologies du son et l'écoute.

### **::LES PRODUCTIONS MULTIMÉDIAS::**

On demandera aux participantes de donner des extraits d'une de leurs pièces sonores récentes pour une production multimédia qui sera complétée dans la dernière année du projet. Cette pièce rassemblera des images, des partitions, des notes de travail et des commentaires sur chacune des méthodes de travail de chaque participante. Des hyperliens seront employés pour montrer les liens entre les idées et les approches des participantes. La production sera complétée sous la direction d'Andra et basée sur les idées et les principes générés par le groupe de travail.

### **::LA COMMUNICATION DES RÉSULTATS::**

Les publications sur ce projet seront présentées à des conférences d'organisations comme l'International Symposium on Electronic Art, l'International Computer Music Association, le Sonic Arts Network, le Electronic Music Foundation, le Canadian Communications Association, et le Society for Ethnomusicology, en plus d'être publiés dans les journaux scientifiques (=scholarly journals ?) associés avec ces groupes. De plus, le projet multimédia sera accessible dans Internet (en version raccourcie) et éventuellement sur DVD. Le projet multimédia sera aussi présenté dans des festivals des arts du son, de musique et de multimédia. Par cela, le projet sera accessible aux professionnels et à la relève dans des domaines variés.

### **::THÈMES GÉNÉRATIVES::**

"Thèmes générateurs" est un terme utilisé par Paulo Freire (1983, 1988), et réfère à une méthode d'analyse qui implique de discuter et de répondre à des questions soulevées par les informateurs. Freire recommande que l'éducation littéraire soit basée sur les inquiétudes des étudiants, qui sont adressées dans les discussions basées sur des thèmes qui sont générés par les inquiétudes des participants. « En dedans et dehors du studio » suivra une méthode basée sur celle de Freire, donc elle impliquera une lecture à travers les transcriptions des entrevues pour identifier les mots clés ainsi que les phrases, les questions et les inquiétudes communes. Ceux-ci seront donc communiqués aux participants en vue d'obtenir leurs commentaires.

## **::LA COMMUNAUTÉ A TRAVERS LA RECHERCHE::**

Un des principaux buts de « En dedans et dehors du studio » est d'amener les productrices de son à discuter ensemble des thèmes qu'elles considèrent importants à leurs travaux. Souvent, les productrices de son sont isolées par les limites de leurs disciplines et par la distance géographique. La plus grande partie du projet prendra la forme d'ateliers pour les compositrices, les artistes du son, les ingénieures du son, les productrices de son de film, de multimédia et de radio pour ainsi rassembler les femmes provenant de plusieurs différentes disciplines. Les participantes seront aussi impliquées dans le processus d'édition, facilitant leur accès aux idées et aux approches des autres.

## **::RECHERCHE PARTICIPATIVE::**

"En dedans et dehors du studio" s'engagera avec d'autres productrices sonores à travers une série d'ateliers qui mettront l'emphase sur l'échange de techniques et d'idées de composition. Ces ateliers seront enregistrés pour permettre par la suite une transcription et une analyse, et formera la base de la première phase de recherche.

## **::À PROPOS DE NOUS::**

**Dr. Andra McCartney** est assistante professeure au département de communication de l'Université Concordia où elle enseigne le son dans les médias. Elle est aussi une artiste du son et du multimédia. Elle a à son actif plusieurs travaux multimédias ainsi que plusieurs articles de recherches publiés sur le Web.<http://www.andrasound.org>

**Dr. Karen Pegley** enseigne au School of Arts and Letters, au Atkinson College, à l'Université de York à Toronto. Elle a publié des articles concernant les cultures des jeunes, les pratiques de consommation de la musique et la formation de l'identité ainsi que les effets les technologies multimédias sur l'éducation musicale. Ses récentes recherches se concentrent sur la construction du genre, de la race et de la nationalité à l'intérieur des vidéos de musique populaire et de formats de musique à la télévision.

**Dr. Ellen Waterman** est assistante professeure dans le programme études culturelles à l'Université de Trent où elle enseigne des cours de musique, incluant un atelier en production et performance sonore. Ses recherches touchent l'ethnographie et la performance avec un intérêt dans les questions de la collectivité et de l'identité en contextes musicaux non-commerciaux. Son travail de terrain a inclut le genre et la direction d'orchestre, théâtre de musique environnementale, et les contre-cultures des jeunes.

**Anna Friz** est une étudiante aux études supérieures à l'Université Concordia dans le programme de Maîtrise en arts en études des médias. Elle est aussi une artiste du son, une interprète, programmatrice radiophonique, productrice et curatrice. Elle a créé des pièces pour CBC Radio 1, la Radio 2 du Danemark et ORF Kunstradio d'Autriche. Au cours des trois années où elle a travaillé comme coordinatrice à la programmation à CiTR Radio (Vancouver), elle a agi à titre de curatrice pour le projet des « 24 Heures de l'art de la radio » de 1999 et 2000. Elle a récemment présenté une performance au Festival du Son send+receive à Winnipeg.

**Owen Chapman** est aussi un étudiant dans le programme d'étude des communications de l'Université Concordia et travaille avec Andra, sa directrice de thèse de doctorat. Ses intérêts incluent le turntablism, la production du rythme et la conversation du sonore. <http://www.doctor-o.com>

**AnneMarie Ennis** est aussi un étudiant du programme des communications à Concordia. Elle est un nouvel habitant de Montréal, ayant complété son étudiant dans la Conception de Communication Visuelle à l'Université de Alberta. Sa recherche du moment est concentré sur le développement de



langue de vernaculaire et l'usage.

**Lisa Gasior** a entendu depuis la naissance mais a commencé à écouter il y a 5 années. Récemment gradué avec son bacheloretat dans les Communications et le Journalisme avec un mineur dans les Etudes Electroacoustiques à l'Université de Concordia, elle commence sa maitre dans le Communication à Concordia en Septembre. Lisa est un aide de recherche pour Dr. Andra McCartney et un aide de l'enseignant dans les classes de production à Concordia. Lisa à lespoire d'introduire des autres aux joies d'écouter et de créer des beaux compositions sonaires.

**Dautres participants incluent:**

Hildegard Westerkamp (soundscape composer)  
Nancy Tobin (theatre sound designer and sound artist)  
Diane Leboeuf (museum sound designer)  
Shelley Craig (NFB film re-recording mixer)  
Michelle Frey (video game sound designer and sound artist)  
Marcelle Deschênes (electroacoustic composer)  
Marian van der Zon (sound documentary producer)  
Chantal Dumas (radio artist)  
Jennifer Balabanov  
Diana Burgoyne  
Michelle Frey  
Eileen Kage  
Bobbi Kozinuk  
Sylvi MacCormac  
I8U  
Julie Fainer  
Kathy Kennedy  
Allison McAlpine  
Elaine Stef  
Rita Ueda  
Elizabeth Vander Zaag  
Annabelle Chvostek

## **::LES PARTICIPANTS::**

**Hildegard Westerkamp**

**Hélène Prévost**

**Nancy Tobin**

**Marian van der Zon**

**Shelley Craig**

**Diane Leboeuf**

**Autres Participants**



### **SOUNDING PLACES WITH HILDEGARD WESTERKAMP**

In the winter of 1989, on Peterborough's community radio station, Trent Radio, I heard Hildegard Westerkamp's Cricket Voice. I was transported into a world in which the song of a single cricket reverberated and resonated in a way that I had never heard before, in an expansive place. Moreover, I felt urged to compose. It was an odd sensation. I had grown up listening to and playing a wide variety of music, and had always been drawn to electroacoustic music (even though initially I didn't call it that) since first hearing it in England at a very early age. I had heard the work of hundreds of composers, and had never felt drawn to compose electroacoustic music before. Yet now a powerful desire to record sounds and work with them on tape caused me to go out, rent equipment, and begin. Since then, I have discovered that through her composition, teaching, and radio work, Westerkamp has had a similar effect on other composers, and is a particular source of inspiration to many women composers in Canada. I believe that this is due to the way she approaches soundscape.

*- Dr. Andra McCartney -*

Hildegard Westerkamp is a composer, radio artist and sound ecologist. She presents soundscape workshops and lectures internationally, performs and writes. Hildegard Westerkamp was born in Osnabrück, Germany in 1946 and emigrated to Canada in 1968. Her daughter, Sonja Ruebsaat was born in 1977 and is the designer of this webpage. After completing her music studies

in the early seventies Westerkamp joined the World Soundscape Project under the direction of Canadian composer R. Murray Schafer at Simon Fraser University (SFU) in Vancouver. Her involvement with this project not only activated deep concerns about noise and the general state of the acoustic environment in her, but it also changed her ways of thinking about music, listening and soundmaking. Her ears were drawn to the acoustic environment as another cultural context or place for intense listening. The founding of Vancouver Co-operative Radio during the same time provided an invaluable opportunity to record, experiment with and broadcast the soundscape. One could say that her career as a composer, educator, and radio artist emerged from these two pivotal experiences and focused it on environmental sound and acoustic ecology. In addition, composers such as John Cage and Pauline Oliveros have had a significant influence on her work.

While completing her Master's Thesis, entitled *Listening and Soundmaking - A Study of Music-as-Environment*, she also taught courses in Acoustic Communication together with colleague Barry Truax in the School of Communication at SFU until 1990. Since then she has written additional articles and texts addressing issues of the soundscape and listening and has travelled widely, giving lectures and conducting soundscape workshops, internationally. She is a founding member and is currently active on the board of the World Forum for Acoustic Ecology (WFAE), as well as the Canadian Association for Sound Ecology (CASE). Between 1991 and 1995 she was the editor of *The Soundscape Newsletter* and is now on the editorial committee of *Soundscape - The Journal of Acoustic Ecology*, a new publication of the WFAE.

Her compositions have been performed and broadcast in many parts of the world. The majority of her compositional output deals with aspects of the acoustic environment: with urban, rural or wilderness soundscapes, with the voices of children, men and women, with noise or silence, music and media sounds, or with the sounds of different cultures, and so on. She has composed film soundtracks, sound documents for radio and has produced and hosted radio programs such as *Soundwalking*, and *Musica Nova* on Vancouver Co-operative Radio.

In a number of compositions she has combined her treatment of environmental sounds extensively with the poetry of Canadian writer Norbert Ruebsaat. (*Cordillera*, *A Walk through the City*, *Cricket Voice*). She also has written her own texts for a series of performance pieces for spoken text and tape. In addition to her electroacoustic compositions, she has created pieces for specific "sites", such as the *Harbour Symphony*, and *École polytechnique*. In pieces like *The India Sound Journal* she explores the deeper implications

of transferring environmental sounds from another culture into the North American and European context of contemporary music, electroacoustic composition, and audio art. In 1998 she collaborated with her Indian colleagues Mona Madan, Savinder Anand, and Veena Sharma on a sound installation in New Delhi entitled *Nada-an Experience in Sound*, sponsored by the New Delhi Goethe Institut (Max Mueller Bhavan) and the Indira Ghandi National Centre for the Arts. And most recently she created together with photographer Florence Debeugny, *At the Edge of Wilderness*, a sound installation about ghost towns in British Columbia, commissioned by Vancouver's Western Front Society.

By focusing the ears' attention to details both familiar and foreign in the acoustic environment, Westerkamp draws attention to the inner, hidden spaces of the environment we inhabit. Her compositional work has been discussed in various articles, but most extensively in Andra McCartney's dissertation, *Sounding Places with Hildegard Westerkamp*.



### **HÉLÈNE PRÉVOST, RÉALISATRICE, PRODUCTRICE**

Ses mains sur la console, ses yeux sur l'écran d'ordinateur ou surveillant les niveaux, Hélène Prévost se consacre tout entière à sa tâche. Ses gestes sont assurés, rapides. Elle ouvre et ferme les boîtiers de CD, lance les éléments sonores, ajuste les potentiomètres... Elle a l'habitude, elle est dans son élément, elle joue et elle crée. C'est comme une chorégraphie improvisée où l'improvisation est maîtrisée. « Une maître! » voilà ce qu'on se dit lorsqu'on assiste à un mix d'Hélène Prévost.

Chaque semaine Hélène Prévost prépare un bloc de deux heures dans l'émission *Bande à part* (musique émergente) de Radio-Canada, sur la chaîne Espace musique. Son émission, *Déjà ailleurs*, est diffusée dans la nuit du samedi au dimanche à 4 heures du matin. Elle y présente de la musique d'avant-garde et des extraits d'interviews qu'elle a réalisées : « C'est un travail de création, un travail d'artiste où je suis vraiment maître d'œuvre. J'insère un contenu à caractère philosophique où il y a une quête de sens, une spiritualité. J'interview des gens qui ont un message à un autre niveau que la musique. Leurs propos se mêlent ensuite à des musiques qui ont aussi

beaucoup de sens et beaucoup de caractère. Ces musiques ne sont pas là pour illustrer les propos des invités mais plutôt pour les faire rebondir. Ce sont des musiques aux esthétiques souvent extrêmes, minimales ou bruitistes, instrumentales ou électroniques, mixtes... Et le défi, c'est de rejoindre les gens qui ne sont pas familiers avec ces musiques par les propos des invités. Il y a donc une double intention. »

Double intention, où les interviews et les musiques fonctionnent en parallèle : « Je reçois des disques, j'écoute, je fais des choix. Par ailleurs j'invite des gens, des gens de la rue ou des penseurs, à venir discuter. Par exemple, j'ai reçu un médecin acupuncteur, spécialiste de la pensée chinoise et humaniste. J'ai fait une heure d'interview avec lui que j'ai découpée en 35 clips de 50 secondes à une minute : c'est presque du micro-montage, je ne laisse pas de longs pans d'interview. On n'entend pas mes questions, et il y a des plages de six, sept minutes de musique. Le résultat final, c'est comme quelqu'un qui réfléchit à voix haute. »

Pas de contrainte de forme, pas de bulletins de nouvelles qui viennent couper l'émission, pas d'obligation dans les durées. Les invités sont des personnes qui ont vécu des expériences extrêmes, qui sont partis à l'aventure ou qui peuvent parler de la mort, de la paternité, de la liberté... « Je choisis aussi des personnes que je connais. Des artistes souvent. Par exemple Eva Quintas, une vidéaste qui a beaucoup voyagé et qui a réfléchi au rapport à l'Autre. Un autre exemple : un collègue qui fait de l'accompagnement aux mourants. Nous allons parler de la maladie, de la mort, des gestes de la fin. J'aimerais faire une interview avec un bio-éthicien, qui travaille avec la poésie, la présence et l'écoute plutôt que la médication. J'aimerais discuter avec un alpiniste, une prostituée... J'ai aussi interviewé une architecte sur l'architecture de la pensée et des réseaux. C'est donc une façon d'investiguer la pensée à travers des expériences humaines. »

Les sujets qu'elle aborde avec ses invités varient selon les moments et les préoccupations de chacun : les élections américaines, l'utopie, la liberté, le bien commun, le droit à l'expression, l'espace, la relation aux autres, la communauté, l'engagement, les idées, la violence, l'amour, le silence, l'art, l'urbanité, les réseaux, la virtualité...

## **CONSTRUIRE UNE ÉMISSION**

« Ça fait des années que je manipule la musique et le son, et je fais aussi des interviews et du montage depuis longtemps. Je suis donc sensible à la petite forme et à la grande forme. Pour Déjà ailleurs, j'ai adopté un format où je commence avec de la musique. Au bout de 10, 15, 20 minutes, arrive

l'espace de l'individu. Mes invités se présentent eux-mêmes, ce qui me donne une grande marge de manœuvre. Il y a des arrimages musique-paroles qui se font sans rien forcer. Je fais des choix, je peux faire des ruptures, je peux aller dans l'énergie de la personne... c'est un travail de création au cas par cas. J'avance en labourant, et au bout d'un moment j'ai un bloc. J'avance par blocs. Je mixe un bloc, puis un autre... je les mets ensemble... je peux ainsi construire l'émission en commençant par le milieu par exemple. Pour la fin, je sais que l'émission qui prend le relais à 6 heures diffuse de la musique classique : je vais souvent m'arranger pour qu'il y ait une courbe, à la fin, qui mène vers cette autre émission. Mais je n'y suis pas obligée. Je peux aussi finir sur quelque chose de très bruitiste! »

« J'avance en labourant » qu'est-ce que ça signifie, concrètement? « Labourer, c'est comme composter ou comme faire une tarte... mais j'essaie de ne pas trop manipuler, parce que j'ai peur de perdre le jus! »

« Je crois que c'est tout à fait en ligne avec ce que c'est que de faire de la radio : c'est d'essayer de se mettre à la place de la personne qui écoute. Souvent je fais des choses, je recule ma chaise, j'écoute... ou bien je grille un CD, et je vais l'écouter dans ma voiture. la voiture offre une écoute discriminante. Si ça passe bien, si les niveaux



« J'avance en labourant »  
qu'est-ce que ça signifie,  
concrètement?  
« Labourer,  
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parce que j'ai peur  
de perdre le jus! »

sont bons, si le rythme est bon, alors j'ai quelque chose entre mes mains! C'est vraiment un espace intime, c'est différent d'avoir des écouteurs mais c'est plus intime que le studio. » Et faire de la radio? « La radio, c'est des énergies. C'est du temps. Du temps serré, du temps qu'on laisse aller. C'est un espace de fiction : la personne qui parle peut nous entraîner dans un espace où on n'avait pas du tout l'intention d'aller... »

« Souvent quand on fait des mixages, il y a des accidents heureux. Des fois, ça marche! Je suis toujours fascinée quand il y a des coïncidences que je n'avais pas prévues. Je me dis 'comment ça s'est fait?! C'est presque miraculeux!!' mais en fait, c'est normal : si je mixe une interview, je mixe l'énergie d'une personne qui est de la même nature que moi. Cette personne a un rythme dans la parole, dans son souffle, dans sa manière d'élaborer les idées. Et mon rythme et mon souffle peuvent lui ressembler. Donc les coïncidences ne sont peut-être pas des hasards : nous sommes dans les

mêmes énergies! C'est organique. Ça devient organique. Mon travail est organique : c'est de l'énergie des personnes et de la musique que ça naît. »

## **LE SON**

« Ma mère me dit que j'ai commencé à faire de la musique avant de parler. Je gazouillais! J'avais un petit instrument, un petit harmonica, que je mettais sous mon oreiller et le matin j'en jouais. À cinq ou six ans je composais des petites pièces, je bricolais mes instruments. Ça part de loin! J'ai étudié la musique mais j'ai aussi beaucoup expérimenté. La radio est arrivée un peu par accident. J'avais fait un peu de tout, pour le théâtre, l'enseignement, la recherche. J'ai fait de la chanson, de la musique de bricolage, de la musique concrète, de la 'patente!' et c'est en arrivant à la radio que je me suis aperçue que tout ça me servait. La radio m'a permis d'explorer le monde sonore de plus en plus profondément. »

« J'aime le son. Je peux me lever le matin et écouter de la musique assez radicale, par exemple de la musique industrielle... du son! Puis en après-midi j'écoute Mozart, Bach ou Brahms. J'écoute Glen Gould ou du jazz. En fait j'écoute tout le temps! Mes oreilles sont toujours ouvertes. Tout est paysage sonore, un paysage qui bouge sans arrêt. Et pour moi, tout est possible, tout est légal : la notion de non-musique n'existe pas pour moi. Est musique ce qu'on décide qui est musique! Par exemple, j'aime beaucoup les bruits de machine, les moteurs. Les moteurs de bateau, de motos, les fournaies, toutes les mécaniques, ça me ravit! Je peux m'asseoir, l'écouter, et j'écoute de la musique! »

Plus qu'un mode de vie, « c'est un mode de pensée, c'est une façon d'entrer en relation. Plus j'écoute de la musique électronique, plus j'entends la fragmentation du son. Les artistes qui manipulent le son par l'électronique le disent : ils fragmentent le son et en arrivent à diviser la cellule du son. Ce n'est pas de la musique atomique, mais presque! C'est de la nano-musique, parce que par l'informatique, on peut étirer le son, le diviser. Comme si on ouvrait le son, qu'on allait dans sa genèse, dans son ADN. Les musiciens 'manipulent' l'ADN du son. Le son est un phénomène acoustique, mais quand on va voir ce qui se passe à l'intérieur, on frôle l'infini. Ça n'a pas de fin. Et aujourd'hui avec les technologies, par la numérisation, on arrive à fragmenter jusqu'à en arriver à un autre monde!

Parfois j'ai l'impression d'entrer dans une tempête de sable, et plus j'avance plus ma tête est dans la tempête de sable et plus je suis dans le son. C'est une densité, des molécules... il y a des sons massifs, granuleux, des sons transparents, lisses... Il y a ensuite les tonalités, les mouvements, les

formes... et toutes les technologies et la pensée informatique contribuent à la fragmentation de nos perceptions et des formes. Aujourd'hui l'éventail est donc ouvert. On est dans un mouvement d'expansion, tout est possible : installations, vidéos, trucs interactifs, des espaces sensibles qui réagissent au chaud, au froid, au mouvement...»

## **MODÈLES et SOURCES D'INSPIRATION**

« Tous les artistes que j'ai eu l'occasion d'enregistrer ces dernières années, surtout ceux qui prennent des risques, sont des modèles pour moi. Je pourrais en nommer plusieurs : Jocelyn Robert, Laetitia Sonami, Christophe Migone, Alexandre Saint-Onge et bien d'autres... Des artistes qui sont à la fois des penseurs, et des personnes connectées, qui sont dans un mode 'organique' avec ce qu'ils manipulent : des petits moteurs, des bruits parasites, filtrés... ce sont des personnes qui travaillent avec l'électricité. Ils sont branchés, ils sont dans l'organicité de la matière. Je suis dans un pays de connaissance avec eux, ça correspond à mon mode de pensée. Je me sens près des gens qui manipulent des objets. J'aime voir leur attitude, quel genre de personne est l'artiste : en général ce sont des personnes humbles, des chercheurs qui manipulent avec leur main, ils ont beaucoup de dévouement et d'engagement. Ils y croient. C'est essentiel pour eux : ce sont des poètes, des ingénieurs. »

## **DES EXPÉRIENCES SONORES MARQUANTES**

« Je me rappelle à Victoriaville il y a quelques années, des musiciens japonais, de Noise Radical, au test de son, 130 db dans la salle... il fallait fournir des bouchons aux techniciens! J'ai adoré cette expérience : c'est comme rentrer dans une tempête, puis tu te rends compte qu'il y a une deuxième couche, il y a du bleu, du rouge, du mauve... Ensuite avec la console, on peut contrôler le niveau de bruit. Et encore à la diffusion : la personne peut l'écouter pas fort, et ça devient de la musique de chambre... donc tout est relatif! Ça' été une expérience extrême. »

L'autre expérience marquante, c'est au contraire un moment minimal : « C'était avec Alexandre Saint-Onge, au silophone, le silo à grains numéro cinq à Montréal, un silo qui est devenu un instrument, grâce à Thomas McIntosh et Emmanuel Madan, (The User). Alexandre St-Onge avait mis un micro dans sa bouche, sa déglutition allait dans le silo et revenait via des hauts-parleurs dans la salle! »



## **GENRE**

« Le monde dont je parle n'est pas un monde de femmes... En même temps, je m'entends très bien avec les artistes musiciens. Mais les femmes sont minoritaires. C'est définitivement un monde d'hommes, la musique technologique. Est-ce parce que il y a beaucoup de 'patentes'? Certaines femmes sont très compétentes, d'autres ne sont pas intéressées et elles le disent. Certaines peuvent refaire leur studio régulièrement, d'autres ont des serviteurs... »

« Les premières années il faut faire ses preuves. Je me rappelle qu'au début j'ai eu des problèmes avec un studio, et on riait de moi. Ça' pris six mois avant qu'ils ne se rendent compte qu'il y avait un trouble intermittent. Ils ont vu que je ne parlais pas à travers mon chapeau. »

« Il faut apprendre à prendre sa place, à se faire respecter. Le sérieux de notre travail et notre engagement parlent pour nous. Par contre, on ne passe pas inaperçue... Je crois que ma sensibilité est différente, je remarque des choses que d'autres ne remarqueront pas, parce que je suis une femme. J'ai appris à voir cela comme une richesse. »

## **TECHNIQUE**

« J'aime beaucoup les appareils de basse qualité. Des micros cravate 'cheap' ou des machines qui ont des défauts. Elles génèrent des accidents qu'on ne peut pas prévoir et qu'on peut intégrer dans un mix. J'aime aussi beaucoup les limites de la distorsion parce que les choses sont défigurées, c'est comme une photo égratignée. »

« J'ai beaucoup travaillé avec le ruban. J'adore le montage! Je me suis beaucoup amusée avec la bande : l'inverser, la plier... un travail de musique concrète dans la tradition. Toucher une bande, l'arrêter avec ses mains quand le son roule... Avec les nouvelles technologies c'est une approche différente. Il y a eu un transfert difficile à faire... ça m'a pris un bout de temps avant de changer d'environnement, car la nature du son change. Mais j'aime que les connections, plugs-ins, transformations soient faciles, accessibles pour les petits budgets. Selon moi, le mieux est d'allier les deux technologies. Il faut garder les vieux synthés, magnétophone à bande, table-tournante, et travailler aussi avec Pro-Tools! Quand on aime le son dans toute sa diversité, on a ainsi une plus grande gamme de couleurs. »

« J'ai une console de mixage aussi à la maison, ce qui me permet de filtrer, égaliser le son, ajouter, enlever... J'ai aussi une banque de sons : des 'scratch, des bings, des pocs, des bings, des clings,' et je sais où aller les

chercher, je sais comment les fabriquer aussi si j'ai besoin d'un grondement ou d'une basse fréquence... J'ai beaucoup produit, mais j'ai peu produit d'œuvres parce que mon travail était toujours inséré dans mes émissions de radio. Alors j'ai fait beaucoup dans la petite forme, des 30 secondes, une minute... ce qui fait que j'ai beaucoup de petits 'débris' que j'ai conservés et dans lesquels je peux aller piger au besoin.

## **INSPIRATION**

### ***Les Billes & Max***

Réalisé au Studio Avatar à Québec, où Hélène Prévost était en résidence en 2000. C'est une expérience sonore de billes dans des assiettes en métal en roulement. « Je m'intéresse beaucoup aux billes. Leur surface n'étant jamais parfaite, quand elles roulent elles entraînent une telle diversité d'accidents! Et le programme Max\MSP permet de développer des projets très personnels, pour des installations autonomes ou pour modifier les paramètres pendant que les billes bougent : l'intensité, le grain, le rythme...».

### ***South and North***

Ce sont des extraits d'une pièce proposée à un événement qui avait lieu en Australie à la fin des années '90, Extatic. C'est un travail fait à partir d'un incident technique sur un Lexicon : « Un jour je voulais ajouter une réverbération sur un élément, mais il y avait un court-circuit dans le Lexicon. Ça faisait de la distorsion tellement forte que je me suis empressée de l'enregistrer! J'ai simplement fait ressortir la beauté de ces incidents électriques et audio. Le south est plus bruitiste, dur, il y a plus de crêtes dans le son. Le début est comme une tempête, puis on va vers la déchirure. Le north est plus doux. Les coupures sont voulues. >>

**North** - 0 min 24 sec

<<C'est assez ultime.

Pendant un test de son, je <<niaisais>> en disant

'bon', 'ben':

et j'ai repris en boucle,

en me répondant à moi-même.

C'est un travail sur la perception.

Il y a la voix seulement, presque pas de traitement.

La voix est dans l'espace,

des fois à droite, des fois à gauche.

L'idée, c'est d'emmener quelque chose de très banal,

qui est presque l'absurdité,

à sa limite mais sans perdre le sens.>>

### ***Mix Radio***

« C'est un travail de sous-saturation : j'ai enlevé toutes les hautes fréquences. Il y a différentes sources, parlées et musicales, qui perdent toutes leur caractère. Tout est feutré, 'moffé' jusqu'à un certain point. Ça forme une

espèce de 'bouillie' ou de pâte que je trouve intéressante. Ça frappe dans le plexus. »

« bon ben... »

« C'est assez ultime. Pendant un test de son, je 'niaisais' en disant 'bon, ben...' et j'ai repris en boucle, en me répondant à moi-même. C'est un travail sur la perception. Il y a la voix seulement, presque pas de traitement. La voix est dans l'espace, des fois à droite, des fois à gauche. L'idée, c'est d'emmener quelque chose de très banal, qui est presque l'absurdité, à sa limite mais sans perdre le sens. »

### ***Metropolis Montreal***

C'est un projet sonore de Montréal commandé par la WDR, la radio publique allemande à la fin des années '90. « Claude Schryer et moi avons fait un projet axé sur les saisons. C'est un projet de musique concrète et de musique environnementale, à partir de prises de son sur le terrain, puis de traitement en multi-pistes. »

« L'œuvre est divisé en quatre sections correspondant aux quatre saisons. Claude et moi avons fait deux saisons ensemble et chacune une saison en solo. Hiver est ma saison solo, réalisée à partir de prises de son anecdotiques : la voiture, les bottes sur le plancher, le vent... C'est une lecture poétique et métaphorique de l'hiver. »

Le micro est stéréo, avec les deux capsules sur le même micro. L'enregistrement a été fait avec une enregistreuse DAT. Le montage et le mixage est sur Pro-Tools.

**Extrait de Metropolis Montreal** - 0 min, 42 sec



### **:: about the interview ::**

I interviewed Nancy Tobin in the context of a four-year, multi-university Canadian research project initiated by Dr. Andra McCartney (Concordia). The intention of this project is to study the experiences and working practices of

women sound producers in Canada, and to produce a multimedia computer installation and set of writings about their ideas, approaches and philosophies. We are studying gender issues that affect the work of these women in fields as diverse as film sound recording and post-production, sound engineering, radio art, sound design for museums and theatre, experimental music, audio documentary production, video game sound and web sound. Considering that there are relatively few women working in these professional areas, we are curious to know how the women who are in the field became interested in sound, how they proceeded and what challenges they have faced so far; and particularly how different women access and appropriate sound technologies. Other co-researchers on the project include Drs. Beverly Diamond (Memorial), Karen Pegley (Queens) and Ellen Waterman (University of Guelph). This article is the first in a series of three profiles to appear in Musicworks.

*This feature was written in the framework of Dr. Andra McCartney's Dedans et Dehors le Studio project—a multi-university ethnographic study of women sound producers. Photos by Nancy Tobin and Stephanie Jasmin.*

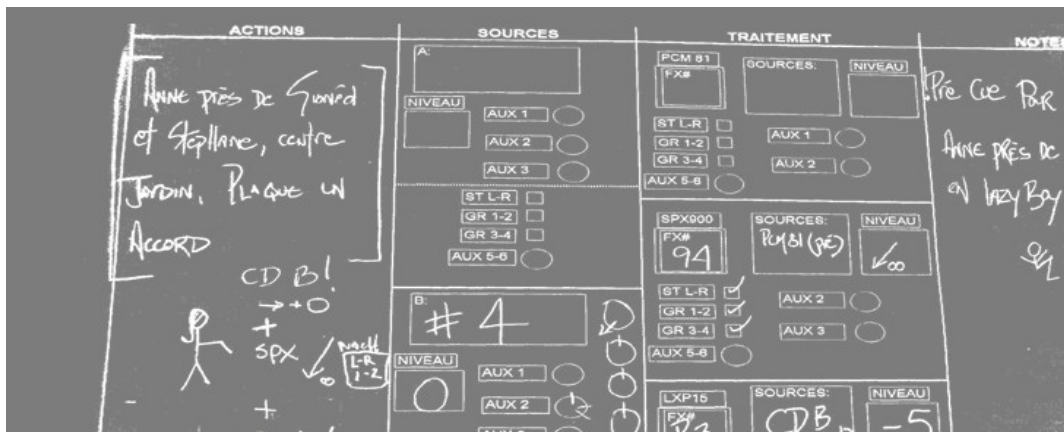
## **ABOUT NANCY TOBIN**

Nancy Tobin is a Montreal sound designer for theatre and dance. Tobin specializes in subtle systems of amplification resulting in intimate atmospheres, innovative use of loudspeakers, and electro-acoustic work inspired by microsound and glitch music forms. She works with the acoustics of the presentation space, with the tonal qualities of amplified voices and the 'voice' of pre-recorded sound sources when amplified through various speakers. Tobin is particularly known for her trademark natural-sounding vocal amplification and manipulation of sound with various types of loudspeakers. Through Tobin's design the liveness of theatre encounters the intimacy of cinema, as the actor can whisper or make small expressive sounds without the exaggerated character of stage projection; thus transforming the methods of both actor and director and enabling poetic, abstract, and minimalist theatre experiments, such as Denis Marleau's *Les Aveugles*.

I first encountered Nancy Tobin's work through her website entitled *RestArea*, featured in Studio XX's *Les HTMLles/ Maid in Cyberspace* festival in Montréal in 2001. The site is "an ambient website for relaxation", a soothing blue plane inhabited by coloured rectangles slowly drifting across the screen, intentionally reminiscent of a television test pattern or a Piet Mondriaan painting. The accompanying soundtrack is of the microsound ilk— a clicking rhythm layered with other minimal tones. The overall aesthetic is like Nancy

herself—unassuming and deceptively spare, with layers of complexity at work behind an uncluttered presentation. RestArea won the First Prix du Public at Les HTMLles 2001 and was shown at the New Museum of Contemporary Art in New York, but Nancy Tobin is best known as a sound designer for stage. Her work has been part of the Festival de Théâtre des Amériques, the Festival International de la Nouvelle Danse, the World Stage Festival, the Festival d'Avignon, the Edinburgh International Festival and the Berliner Festwochen. In 2002, she was nominated for the "Masque de la contribution spéciale" by the Académie Québécoise du théâtre for her sound design of *Intérieur*, directed by Governor-General's Award winner Denis Marleau. She works primarily with experimental theatre and dance directors such as Danièle Desnoyers, François Girard and Denis Marleau, people who are, she affirms, "good ear people". Tobin specializes in subtle systems of amplification resulting in intimate atmospheres, innovative use of loudspeakers, and electro-acoustic work inspired by microsound and glitch music forms. She works with the acousmatics of the presentation space, with the tonal qualities of amplified voices and the 'voice' of pre-recorded sound sources when amplified through various speakers.

- Anna Friz -



## FORMATIVE FORCES

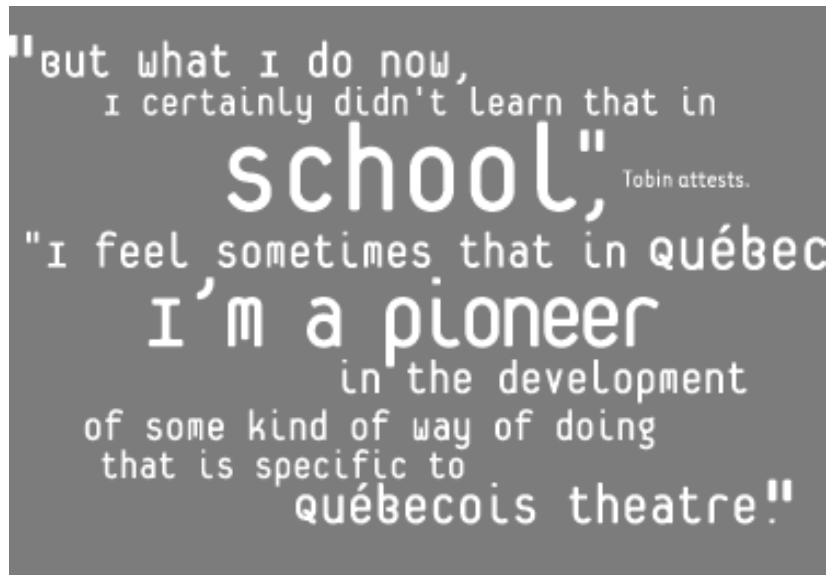
### The intimate voice onstage

Upon completion of her studies in dramatic arts at UQAM in 1989, Tobin worked for several years for smaller theatre and dance companies in Montréal.

The successful adaptation of multi-media for stage is a hallmark of Quebecois theatre. Tobin's work with Denis Marleau and Danièle Desnoyers is particularly rich in part because the directors themselves assign a significant role to the sound design of the production; integrating amplified and composed sound not as embellishments, musical interludes or background,

but as central elements of the presented works.

Sound is the medium in which the performers exist and move, their voices seamlessly amplified, their bodies causing audible change, the soundscape challenging and leading the choreography as much as integrating with it. Tobin is called in early on a production so that sonic elements are created parallel to



choreography and character development, in many case enabling actors and dancers to become amplified sound sources themselves through use of wireless microphones and controlled feedback systems. Tobin is particularly known for her trademark natural-sounding vocal amplification and manipulation of sound with various types of loudspeakers.

This involves delaying the amplified voice in the speakers to match the time it takes the acoustic sound to travel from the stage to the spectator's ears. Tobin relates that while she interned in London, calibrating the speaker delays was a fun group activity. The technicians would people the balconies farthest from the stage while on stage a single speaker emitted a regular pulse, and the speaker delays were set by consensus among the group. Nancy still invites friends to come in when she sets delays in Montréal, so I joined her one afternoon on the set of Théâtre UBU's *Quelqu'un va venir* at Usine C to see how the process works. Usine C is a renovated factory used for theatre, dance and multi-media presentations, and as such does not possess the flawless acoustics of a concert hall. However, by the time Tobin has finished setting the sound system in venue, the most intimate sounds of an actor's voice and breathing can be equally projected to the audience without any separation between the acoustic and amplified voice. For this production, there are five speakers hanging from the ceiling, and four on the floor in front of the stage. Tobin works with another technician to first angle the speakers to cover all the seats in the house-- a finicky and tedious task. The uneven contours of the room alternately reflect and diffuse the sound depending on where one sits in the audience, causing hot spots and dead spots. Checking the angles involves slowly creeping up and down each row,

hunched over to be at the same height as a seated person's head, while the same song plays over and over again through the sound system. Speakers are minutely angled, adjusted, and readjusted. Once Tobin and her assistant are satisfied with speaker placement, we convene near the front row to calibrate the delays, beginning with the two middle speakers on the floor. Another speaker is set on stage to emit a high frequency click track. First we just listen to the clicking speaker, concentrating on the attack of each click; then the two front speakers are faded in to the maximum volume possible until we are aware of a separation. Tobin methodically calls out each delay value in seconds, and we listen and hear the acoustic and amplified sounds draw closer together. By the end, the difference between an audible and an inaudible delay is a matter of milliseconds. Consensus with this group is astonishingly easy—we all hear it the moment the speaker synchronizes with the acoustic sound. We move further back in the seating, and the same procedure follows for the suspended speakers.

Tobin first adapted this method of imperceptible vocal amplification to more intimate venues under the direction of Denis Marleau of Théâtre UBU for a production entitled *Les Trois derniers jours de Fernando Pessoa* in 1997.

These skills were developed through experience in the field, especially from working with directors who provided time and equipment during the production phase of a show to experiment.

With the help of a professional development grant, Tobin went to Broadway and to London's East End in 1997 to observe sound designers at work on huge musicals like *Oliver*. In particular, Tobin was interested in the technique used for amplifying voices so they can be heard in the back rows of large concert venues while remaining synchronized with the acoustic voice onstage. Very little was written about this, so Tobin engineered a kind of apprenticeship for herself, where she learned "through observation and listening to experienced people talk". Tobin spent a month in New York observing a production during its creation by sound designer Tony Miola, and Miola put her in touch with Andrew Bruce in London, where she spent another month's internship. Upon her return to Montréal, Tobin applied and adapted these techniques to smaller venues and budgets, and began to establish her distinctive style.



"My challenge was to create an audio space where the acoustic voice of the actor and the amplified voice of the playback would both seem to be in the same space, as if they were talking to each other in a very realistic manner. There was a clear function that the sound should achieve, specified by the director. Usually in a stage production if there is voice amplification, the idea is just to make the actors voice louder, and there is no specific role for the sound."

In order to create the illusion that actors are not amplified, invisible mics are used, and loudspeakers must be synchronised to the acoustic voice on stage.

Tobin also notes that this was the first time that she was really asked to do sound design as opposed to sound production. "My challenge was to create an audio space where the acoustic voice of the actor and the amplified voice of the playback would both seem to be in the same space, as if they were talking to each other in a very realistic manner. There was a clear function that the sound should achieve, specified by the director. Usually in a stage production if there is voice amplification, the idea is just to make the actors voice louder, and there is no specific role for the sound." Thus Tobin's job was to craft the mediated voices of the characters through amplification techniques and speaker choice. Only a single physical actor was onstage, and he played all the characters in the piece by having video projections onto his face of his face playing each of the other characters. For the recordings to seem as real as the actor, the live actor was also amplified by a small invisible microphone through a speaker with the right tonal quality, thereby allowing him to share the same acoustic space as the recorded voices. Through Tobin's design the liveness of theatre encounters the intimacy of cinema, as the actor can whisper or make small expressive sounds without the exaggerated character of stage projection; thus transforming the methods of both actor and director and enabling poetic, abstract, and minimalist theatre experiments.

## **PRODUCTIONS**

### ***Bataille***



Desnoyers and Tobin continue a study in contrasts in Desnoyers' *Bataille* (2002) which also shares similar staging elements with *Concerto grosso*—the cold fluorescent lighting, and the white square floor functioning more as a plane of inquiry than as a stage. For this production the dancers do not themselves create sound, but there are two dialogic sound sources: Violinist Malcolm Goldstein's live improvisations as he moves around the perimeter of the stage, and electro-acoustic pieces by Tobin created from baroque recordings on vinyl. Desnoyers arrived at Tobin's house with a bag of baroque records one day and asked Nancy to DJ at a rehearsal with these recordings with "the basic aim [being] for it to become something else". After listening to the records and trying some mixes at home, Tobin preferred to keep working at home, as she felt "quite negative" about the material and the possibility for transforming the baroque genre into something else through turntablism: "I would pick any album from the pile and try mixing it to the record already playing. This method was very haphazard." She recorded those mixes to DAT, and began experimenting with the raw material on the computer, which began to yield interesting results. Her compositional method was "inspired by the microsound musical genre; every small crackle or noise that revealed the vinyl format was taken as an opportunity to create a rhythm or a melody. Small vocal excerpts were integrated in attempt to emphasize the emotional quality already present in the baroque style."

The results are sometimes crackling loops and undertones of dub layered with haunting choral samples, sometimes the lurching and looping rhythms of records winding up and down; arpeggiated horn solos engaging full orchestral samples, and ending with a tiny spectral echo like a transistor radio playing in the apartment next door. The emotions reflected from the baroque pieces into Tobin's compositions are grand—voices swell in requiem, a single horn calls a noble but melancholy tribute-- yet the crackles and the pitch shift of the record suddenly slowing remind us that this is all artifice.

tobin notes:  
"From that experience I realized that you can compose an emotional musical piece without being a musician.  
I don't consider myself a musician,  
I don't know the musical language,  
I never work in chords or notes...  
I never read music.  
I speak in tone,  
I speak in hertz,  
I speak in noise,  
I don't speak in tonality.  
but somehow the result is the same, it's just a different path to go toward it."

Tobin's processing of the vinyl reflects Desnoyers' process for the choreography: "[Desnoyers] explained to me that it's not really about a battle as in fight but more about oppositions being confronted. ... What is left? What is created?" Two very different worlds collide in Tobin's compositions, thus creating a kind of counterpoint of her own between the ornate grandeur of baroque music, and what Kim Cascone has termed "the aesthetics of failure" of microsound and glitch genres that enhance the smallest sounds and create rhythms from tiny fragments and digital 'mistakes'. This process of transforming raw material from a very specific musical idiom into electro-acoustic soundscapes would evolve in subsequent collaborations with Desnoyers. Though Tobin learned her DJ skills not with any intention of playing live but to improve her beat sense, DJ techniques shaped the raw material into something she could work with.

Considering that Tobin had little musical experience growing up but came to sound through cut-up tape and mixing experiments on campus/community radio, it is no surprise that her entry into musical composition evolved from the role of technician. Desnoyers' initial goal with *Bataille* had been to create a piece with the sensibility of a museum installation, and that formal aesthetic led Tobin to an interesting aural augmentation: 6 piezo speakers were placed in a row along the back of the performance area. "The frequency range of the piezo speaker is very high and the result is a very thin piercing sound. Sometimes the soundscapes would be amplified by these special effects speakers as well as by the main sound system, as if suddenly another instrument was playing the same parts but in a much higher range." Tobin often employs specialized speakers for their diverse tonal qualities, much like minimal dub producers enhancing high or low frequencies: "I consider the loudspeaker as my instrument. I play and interpret sounds through it, as a violinist reveals the emotions of a score by the way the notes resonate off the strings."

Playing the same track through different kinds of speakers greatly affects not only the equalization of the piece but the texture of the sound as well. Tobin often augments the main PA with other speakers to exaggerate high or low frequencies, thus enhancing or quickly shifting the intensity of the soundscape at a critical moment in a choreography. Choosing specific speakers has also led Tobin to experiments with controlled feedback, as with *Concerto grosso. Duo pour corps et instruments* (2003), Tobin's most recent collaboration with Desnoyers, is a further exploration of controlled feedback, this time placing speakers prominently onstage and the teaching the dancers to improvise with sound creation.

## To hear examples of Nancy Tobin's sound work

### Fellini MASTER

#### ***Duo pour corps et instruments***

Inspired by Patti Smith, Desnoyers wanted to work with rock music for *Duo pour corps et instruments*, particularly sampling and building soundscapes



from guitar solos. Tobin employed some of the same techniques of sampling and mixing from vinyl as with Bataille to create raw, loud, highly charged pieces out of fragments of guitar-god onanism. The dancers, three women, all dress in late 70s/early 80s high heels and black and taupe dresses; their movements enacting a kind of desperate distracted beauty, suggesting an era both decadent and hollow.

However, the piece centers around the titular duos of dancer and speakers: each with a wedge speaker (commonly used by bands in the 70s-80s as a personal stage monitor), and her own small wearable speaker functioning as a microphone. Depending on where the dancers position the small speaker relative to the wedge, varying tones of feedback result, and in some instances, two dancers form another kind of duo when creating feedback tones at the same time. Thanks to an octave pedal and other effects pedals rigged up between speaker and wedge, the sound is piercing but syrupy, sometimes a morse code of dashes when just at the edge of effect. The dancers learned the sensitivity, range and tonal quality of the equipment in rehearsal, and developed a vocabulary of movements with which they improvise to make sound for the performances.

Meanwhile, the speakers themselves are far from static: the dancers sit like nervous party girls on their wedges, fall off them, haul them across the stage and back again, unplug and replug them. Tobin notes, "The wedge speaker was integrated in our sound system as part of the set but also as a way to give to the audience another aural perspective that is more direct as opposed to the main sound system which is more surround." In this way, the three speakers do not merely amplify but take on a role parallel to the three women; though they are controlled by the dancers, the speakers move, they

sound, and they have distinctive voices. There is a compelling subtext at work in the tension between dancer and speakers, and between the two speakers themselves: proximity creates sound and can be very beautiful, but bringing the wearable speaker and the wedge too close together results in shrieks of angry feedback. Playing the speaker is an exercise in managing intimacy.

### ***Collaboration***

Tobin emphasizes the importance of becoming involved in a production early on in the creative process, allowing more time for development and experimentation, and for "developing ways of doing, or methods, that are kind of like inventing this tradition." Working with Desnoyers, Tobin notes the importance of doing the best with very little to start, communicating minimal ideas so that "you start a communication process with the person at an early stage. I don't work alone trying to develop this thing very precise and very developed and then 'here is the finished product.' Because what if she doesn't like it? It is for her choreography." For Bataille, it was a "teeny" loop that led to a whole structure of loops. Desnoyers would ask for 15 minutes of one loop, and then work with it with the dancers. "Somehow the root of the work for me and for her was the same," says Tobin.

Work in a theatre is undoubtedly teamwork, an aspect of her profession that Tobin relishes. "I like it when you create work that becomes something outside of you, that exists without you, something that has nothing to do with you anymore but you're part of it, you've helped it happen." Tobin also stresses that it is important to relinquish proprietary feelings when working collaboratively: "You have to be sort of free, you have to be generous, but not like you're giving something of yourself, it's just this thing that exists, that happened to occur in an afternoon in front of the computer." Tobin considers herself lucky that she has never had to do theatre clichés like create a storm, or cue a train whistle while the curtain drops; "somehow I've always been in contact with people that wanted more."

### ***Les Aveugles***

Denis Marleau's staged video-art installation *Les Aveugles*, fantasmagorie technologique (2002), is an adaptation of Maurice Maeterlinck's static drama from 1890. The staging is extremely minimalist; consisting of twelve masks in a dark room, whereupon the faces of two actors are projected, with each playing six characters. Each projected character also has his/her own speaker. The premise is simple: twelve blind people go out for a walk in the forest. Their guide leaves for a moment, then never returns, as he has

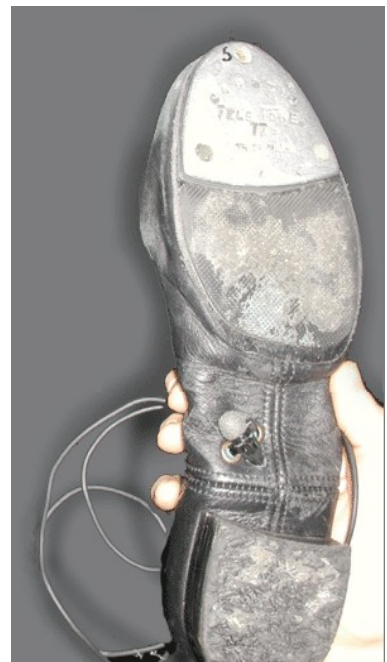
silently died among them. The play takes place with the blind characters stranded in the forest awaiting their guide's return, with the projected actors made truly blind to the audience by their physical absence. The aural aspects of the piece are central to the success of the production—from the amplification of the actor's recorded voices through natural-sounding speakers, to the soundscape of the forest.

Maeterlinck's text describes the sounds the blind hear—breathing, wind, oceans, birds, leaves, steps on leaves, and the sound of stars—and Tobin wanted to integrate these sounds without relying simply on Foley effects. After listening intently to recordings of oceans, winds, leaves, etc, Tobin noticed that all these sounds met in the very high and very low registers. "I realized that all the sounds Maeterlinck wanted included in his play could somehow come from a single instrument. All these sounds are quite similar at the extremes of the human audio spectrum." She began by emphasizing each sound's texture in its extremely low or extremely high frequencies. For instance, the sound of waves against a gravelly beach becomes a fragile rustle when the high frequencies are foregrounded, or can sound like the land itself breathing when mostly lower frequencies are heard. The final soundscape conjures an abstract yet recognizable environment, as ghostlike and subtly evocative as the actors' faces suspended against black, drawing the audience into the dark wood that can only be apprehended by listening.

Concerto grosso pour corps et surface métallique.

### ***Nancy***

Nancy Tobin has worked with Danièle Desnoyers and her company Carré des Lombes through a series of productions, each one an exploration of the body as sound subject and as object moving through a sonorous environment. *Concerto grosso pour corps et surface métallique* (1999) features six dancers moving, predictably, on a metal floor. Some dancers wear tap shoes-- not for a tippy-tapping percussive effect but for scraping the metal surface like skates applied to ice. The ice rink metaphor continues with fluorescent lighting overhead and a rack of 18" battered hockey arena loudspeakers. Two dancers have small microphones wired into the bottom of their tap shoes, whose signal Tobin transforms in the latter part of the piece by considerably lowering the pitch and broadcasting the altered sound through subwoofers stationed at the edges of



the metal floor. Additionally, when a dancer with mic-ed shoes comes into proximity with the speakers, a controlled feedback rumble arises, creating deep eddies of bass harmonics offset by the earlier harsh scour of metal shoes to metal surface. Only some of the dancers wear tap shoes, and only two at a time are amplified, rendering different members of the company audible while others become mute and in some cases are characterized by their choreography as deaf. These elements in turn are heard in relation to recordings of piano music by Morton Feldman and Alfred Schnittke, which are sometimes played through the tinny rink loudspeakers rather than the PA. These elements in turn are heard in relation to recordings of piano music by Morton Feldman and Alfred Schnittke, which are sometimes played through the tinny rink loudspeakers rather than the PA.

The overall effect is one of intense contrasts: Desnoyers has set the organic body in motion between these cold unforgiving elements of metal and fluorescent lighting, which Tobin supports with sounding tools for the dancers which create a sonic landscape that is alternately murky and dark, or sharp and thin. The piano score played through the rink loudspeakers takes on a nostalgic, distant tone due to the compression of the sound and emphasis on high frequencies, much like a song half-remembered from a dark dream of a family skating outing.

## **PRENDRE SA PLACE**

One aim of my interview with Nancy Tobin was to assess her experiences in her field with regard to gender (see In and Out of the Studio sidebar). When I ask Tobin about gender distribution and her experience as a woman in her field, she confidently asserts that she has not experienced gender discrimination working within the Montreal experimental theatre and dance scene. Similarly, during her technical training at UQAM, Tobin may have been among a minority of women but "I certainly didn't feel like I was invaded or invading an environment." However, she notes that if she were to move into bigger mainstream productions, she would need to expend some energy maintaining the level of respect that she currently enjoys. From her time spent observing Broadway and the East End, Tobin finds the situation very unbalanced in terms of gender, and bigger productions also have intensive organizational hierarchies that often reflect mainstream social stereotypes—for instance the captain-like sound engineer at the mixing console is most often male. Tobin comments that if she were to move to bigger productions, she would need to elbow her way in.

On the other hand, there are so few people employed to do experimental sound design for theatre that gender is not an issue for Tobin in her professional life at the moment. She notes that there are only 3 or 4 people in the city who work in this way, two of whom are women. "It's as if I'm setting a standard", she says, and so this new tradition includes women from the beginning. For Tobin, the more immediate challenge is for sound designers to garner respect in theatre and dance. Though lighting design is receiving more recognition, the sound designer is still

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brought in last on a production, given the smallest budget, the least amount of time to work, and the lowest fees. Tobin and her peers are developing new ways of working and new expectations of a theatre experience, but also showing the way for future sound designers in terms of fees and work conditions. Importantly, Tobin is also learning to value own work as professional, for instance demanding to be billed on the show poster and in the press when significant original creative and technical work is done.

## **IN A SIMPLE WAY**

Meanwhile, I am starting to believe that Nancy needs a break at her own RestArea for a while. She works at a relentless pace from production to production, so I wonder if she has energy left over for her solo artistic practice. She describes each production as it's own all-consuming world dictated by deadlines, "so you have to find solutions, the ones you think are most authentic, and you have to find them fast..." However, the time pressure is increasingly not a limitation to creation, as with Duo pour corps et instruments and Les Aveugles which were both developed during residencies at the Musée des Arts Contemporain in Montreal. "Working at the

MAC is always a great situation," notes Tobin. "I think in any creation project the most important thing is to have as much time possible in the actual context where the final result will occur."

Though Tobin could surf on her contacts and technical abilities to date for years, she would like to set aside time to contemplate and play solo: "I feel I have this vocabulary now in sound that I can make little planets or places that would just experiment on this little sound idea, that would not be just aesthetic... "



Tobin wants to  
highlight listening in a socially relevant context,  
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RestArea is a perfect example of such a place, as it is a little pause created in response to an increasingly mediated world where, particularly on the World Wide Web, flashing text and images compete for our attention at high speed. RestArea unfolds slowly and

simply, beginning with two small bars of blue and white moving across the screen, and eventually evolves into a more densely choreographed landscape of striped and coloured bars floating across a blue background. The viewer has not stepped off the so-called information superhighway but is still staring at the computer screen, -- a screen also reminiscent of television and animated advertising hoardings-- yet there is no text, nothing to be bought or sold, and no story told so much as a moment unfolding, over five minutes, again and again, so long as our attention holds. We are made aware of our expectations and impatience with regard to media, and of ourselves staring at the screen, while at the same time enjoying the minimalist sound and abstract shapes. We find ourselves caught in a little paradox—that the screen is providing a rest from the screen.



Tobin wants to highlight listening in a socially relevant context, unlike much new media work that she sees as being superficially beautiful but often unemotional and empty. Her work with Desnoyers and Marleau has set a high standard for challenging audio that seems to lead naturally to her current solo aspirations: "What I really want to work on is something that's a merge of visual art, new media and theatre, in a simple, slow way. I'm not really into big technical stuff... I think if you can get something going in a simple way but it really talks, I think that's the aim." Nancy Tobin's latest solo undertaking is aptly entitled *Risk*, and is a rare moment where she herself will be onstage at the Société des Arts Technologiques (SAT) in Montréal, manipulating sound through some of the feedback tools created for *Duo pour corps et instruments*.

I ask Nancy about the difference between sound design and sound sculpture, and she replies: "The aspect of design for me in sound involves more the technical side...



As for sculpture, it's more about pure creation... Very simply put: a bit like in visual arts; the sculptor and the architect." Just as it can be difficult to separate sculpture from architecture, sound design and sound sculpture are less and less discrete categories in Tobin's work, both collaborative or solo. Whether designing the overall sound environment or specific tools for sound play, Tobin's work brings listening to the forefront of experimental theatre and dance.



## **:: about the artist::**

**Marian van der Zon** is a multi-disciplinary artist who delves into sound art, sound documentary, writing and spoken word performance. She has a background in Women's Studies and has recently concluded a Master's degree in Media Studies at Concordia University. Marian's interests are varied, but often return to an examination of voice, morality, and women's issues. Marian took part in the artist in residency program with DeepWireless 2004, producing "Speaking the Truth of the Moment" and for several years, has contributed to community radio, particularly Victoria's CFUV and Montreal's CKUT. She has also had pieces broadcast on CBC Radio 1. She continues to experiment with low wattage transmitters, broadcasting through TAR (Temporary Autonomous Radio) and encouraging Radio Karaoke. When she is not dabbling with the musical stylings of Victoria basement bands Tailgate Party or Five Year Plan, she is usually found wandering the mountains of British Columbia.

*This feature was written in the framework of Dr. Andra McCartney's Dedans et Dehors le Studio project—a multi-university ethnographic study of women sound producers.*

## **TALKING ABOUT ABORTION**

*A Resurgence in Sound* moves the debate around abortion beyond moral considerations and into themes that are relevant in 2004. The accompanying research essay includes an examination of media discourse surrounding abortion and an examination of the documentary genre, using Talking About Abortion: A Resurgence in Sound as a case study. Relationships of power, issues around ethical representation, and positionality were key considerations during the process of the sound documentary and are addressed within the written component. With this documentary and accompanying research I hope to create a renewed interest and resurgence in discussion around the subject of abortion.

# Abortion

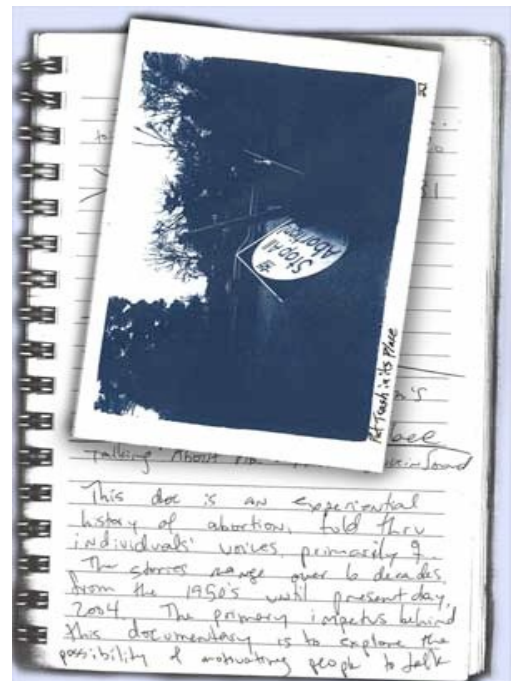
has been referred to as  
“a fundamental aspect of  
human behaviour.”

(Arthur, Abortion in Law, History & Religion 3)

The subject of abortion has virtually disappeared from the media in recent years. I am interested in why this has occurred, but even more importantly, I hope to create a resurgence in discussion around the subject of abortion. It is only through continued thought and discussion that reproductive rights can be maintained and taboos be examined. A full-length sound documentary on the history of abortion told through women's voices has been produced. Talking About Abortion: A Resurgence in Sound moves the debate around abortion beyond moral considerations and into themes that are relevant in 2004. Varied women, primarily Canadian, have participated, bringing in stories from the 1950's through to 2004. Interviews with historians, medical practitioners, and activists were also conducted in order to give the documentary depth and context.

## THE DOCUMENTARY GENRE: A PLACE TO SPEAK

Given my personal motivation to move towards effective documentary practice, examples of my and others' sound and film documentary will be used to reflect on the advantages and disadvantages of various approaches. Bringing in personal reflection and experience will facilitate an ongoing understanding of the creative, technical, monetary, theoretical, and practical choices that need to be made when engaging in the practice of sound and film documentary. Throughout the essay, an ear will be turned towards my project, a full-length sound documentary entitled, Talking About Abortion: A Resurgence in Sound in order to work through relevant considerations. Given the limited length of this essay, it is by no



means a comprehensive examination of the above-mentioned facets of documentary, but provides an opportunity to move my own working practice and understanding of documentary forward in a tangible way.

John Grierson defines documentary as the "creative treatment of actuality" and Jean-Luc Godard and Trinh T. Minh-ha state, "everything is fiction." (Steven, 1993: 15/16) Robert Hilliard asserts, "documentary seeks to explore behind and beneath the obvious." (Hilliard, 1985: 230) The types and genres of documentary are continually evolving and under discussion. The standard definition of documentary used to revolve around travel, biography, and social issues. (Steven, 1993: 13) Today there is greater room for interpretation and creativity, and the lines between documentary and other genres are increasingly crossed. For example, new documentary is innovative formally; it is interested in cultural interpretation and social change, and it is interested in creating more balanced relationships with those involved in the documentary. (Steven, 1993: 8)

"I am realizing  
that it is the personal stories  
that are often superior  
and that continue to move me forward in terms of skill and accomplishment.  
These are the stories that hold interest for others.  
They are stories of learning and discovery,  
not only for myself,  
but for the listener as well."

Alternately, formalism strives to break with conventions and in doing so, at times simply provides reversals; shock tactics may be used in an effort to break new ground at the expense of thematic purpose or coherence. It is sometimes labeled as anti-documentary, anti-history, anti-popular and is largely influenced by the art world. (Steven, 1993: 18) In formalism, new stylistic forms are of importance, but it is not necessarily concerned with social change. (Steven, 1993: 20) And then, the conventional standards of documentary make use of the third person, provide a pseudo objective narration, a reliance on experts (legitimated by dominant society), and follow the expository mode. People of the margins are often left out in favour of following the dominant interpretation of events or story. (Steven, 1993: 20)



## **RADIO AND SOUND DOCUMENTARY**

While there is much overlap between film and radio documentary, radio is not limited by visual presentation. (Hilliard, 1985: 207) Taking into consideration the organizational constraints of the medium, potential visuals are only limited by the imagination. Radio documentary combines many of radio's forms (news, special events, features, music, drama) and should interpret the past, analyze the present, and anticipate the future. At its best, it can do all three within one program. (Hilliard, 1985: 229) My feature length documentary "Talking About Abortion: A Resurgence in Sound" interprets the past, but also analyzes the present with an eye to the future. Radio documentary delves into an examination of a particular topic through sound. As with all documentary, it tends to "address issues in the realm of public or current affairs. It examines topics of interest to all of us but focuses primarily on contemporary politics, economics, and social concerns" and varies in length. (Hesse, 1987: 11) Radio documentary tends to provide greater flexibility with length and, my own documentaries range in length from a couple of minutes to the length of one hour for "Talking About Abortion: A Resurgence in Sound".

Unlike the trend in conventional documentary, an effort has been made to expose my position as the documentary producer. This was done in order to acknowledge the effects of bias on the finished product. The documentary brings a variety of approaches together. Within the narration, a verite style was used. The narrative line is intended to have a conversational, spontaneous style, using two narrators to provide variety and yet address the relevant themes in an effective way. While these aspects of the narrative approach are appreciated, the verite style used, also leads me to question the comprehension of particular narrative lines. At times, narrative thoughts are not as eloquently spoken as they could be.

A storyline or narrative is required in some form in all documentaries. Narrative approaches vary, sometimes moving into the poetic realm. Using a poetic rhetoric, a documentary can provide a story through sequences, through a string of associations and yet still be extremely effective in this subtle approach. In *The Idea of North/ The Idea of Canada* by Steve Wadhams (producer), Laurence Stevenson and Christos Hatzis (composer) a rapid montage approach is often used.

Regardless of genre, style or approach, a good documentary requires excellent storytelling. Robert Hilliard maintains that the documentary "provide(s) the writer's principal form for artistic creativity on the highest level. Writing a documentary sharpens the writer's ability in using the radio medium to its utmost." (1985: 229) Steve Wadhams speaks about how this

is possible and asserts that it is necessary for the storyteller to, "take you into a world that seems exciting and new, and when they've got you there, spellbound, they help you learn something." It is not only about meeting the characters, but also about discovering yourself, how to better live your life and opening up the possibilities of your life. (Wadhams, 2002: 1; Hilliard, 1985: 231) As with any storytelling, be it fiction, fact, or a combination of the two, the best story comes from real life. (Wadhams, 2002: 1) Dan Hart's documentary, *My Father*, is an intensely personal story. Towards the end, there is a conversation with his partner that is psychologically forward looking and hopeful. It is also very intimate, a particular challenge in and of itself. The line between exposing oneself, which often improves the end product, and maintaining privacy is difficult to walk. Part of the work of a good storyteller involves coming to terms with the exposure of oneself. From a personal perspective, given my propensity for privacy, this increases the challenge to develop a good story, push back my own boundaries, and continuously renegotiate what is private and what is open for public consumption.

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(Hilliard, 1985; 229)

## **NEW DOCUMENTARY OR EXPOSITORY DOCUMENTARY**

"Talking About Abortion: A Resurgence in Sound" is an example of new documentary. It attempts to move discussion and thought about abortion in new directions. Within production, creating and maintaining ethical relationships with all participants is important. There are elements of the documentary that fall into the expository mode. The use of story, of women's experiential history, can be conceived as 'authentic' testimony. Outside authorities have been used and a chronological approach has been taken. Originally, "Talking About Abortion: A Resurgence in Sound" was going to be laid out thematically. After having conducted 25 interviews and collecting over 20 hours of audio, it became clear that this approach would be

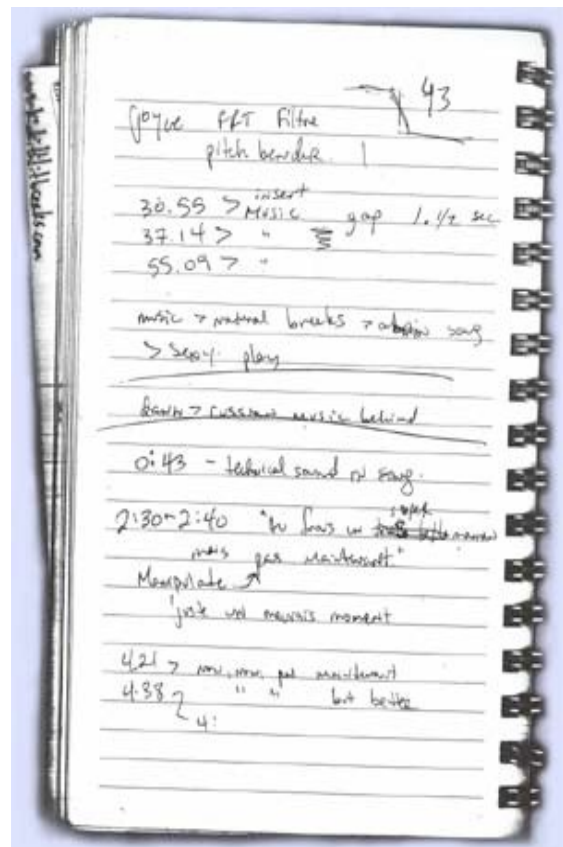
confusing for the majority of listeners. Instead, a historically chronological approach was taken, particularly through the first half of the documentary. In the latter half, the chronological approach gives way to a thematic one, allowing space for both, women's experiences and discussion around the themes.

It is debateable what genre this piece should fall into. This sound piece is an examination of what Canada is. It provides varied and oppositional viewpoints, both a historical and contemporary overview of Canada, but all done in a musical and creative way. It belongs in the genre of new documentary and yet remains highly experimental, even in terms of sound documentary. Above all, it is a definitive example of a piece that continues to stretch the standard definition of documentary. Even the term documentary can now be referred to as "a piece" given the influence of conceptual and performance arts. (Steven, 1993: 16)

New documentary also includes what Tom Waugh defines as the committed documentary. This is documentary interested in "radical socio-political transformation, activism, or intervention." (Steven, 1993: 39) Nettie Wild's (director) film Fix: Story of an Addicted City is an excellent example of this. It is a highly personalized film, one that brings the viewer into the lives of the users in an effective way. It takes a compassionate and experiential approach, and the act of bringing in different viewpoints provides dimension to the complexity of drug addiction. This film is effective because it allows room for different interpretations. It is thought provoking and lets the people involved speak for themselves.

## TECHNIQUES OF SOUND DOCUMENTARY

Debate and preference between interview techniques and styles are varied and could easily warrant a book in and of themselves. For Stephen Schwartz, "if you don't give, you don't get." (Schwartz, 1994:1) Given this rule of thumb, Schwartz is willing to expose his own background to an interviewee, but he is also not opposed to using alternative



methods of interviewing. The more alternative and experimental the interviewing becomes, the more trust enters in as a crucial component. In Schwartz' opinion, the really good stuff comes from pressing on the 'nerve,' the bone of contention. (Schwartz, 1994:5) Because abortion is such an emotional subject matter, "pressing on the nerve," was a relatively easy task. Other than offering up my own stories and perspectives on occasion, no dramatic interview techniques were used. Many of the choices around interviewing are tied in with the subject at hand and the end result that the documentarian is looking for. From any interview, language (content), voice (cultural background, education), the acoustical setting-place you do the interview, and where you position the microphone all affect the quality and feel of the project at hand. (Schwartz 4)

In conventional documentary, controlled set-ups are used more frequently. At times, interviews will be scripted and rehearsed in advance in order to increase the possibility of achieving a particular end. For myself, I prefer to use a more casual style of interview. With experience, comes the ability to occasionally hear good sound clips as they are being spoken.

In order to keep the editing process to a minimum, it is a good idea to use non-verbal feedback such as facial expressions. (Ruoff, 1992:223) Saying this, I am not averse to bringing someone back to the subject at hand should they become tangential. The emotionality of my abortion documentary certainly affected my style of interviewing. I was more open to tangents, particularly around reflection. Rather than being scripted, I asked that interviewees reflect on their experiences both in tangible detail and on the emotional effects of the experience, and then on the experience of the interview itself. Because a combination of snowball sampling and cold calling through a number of organisations (birth control clinics, women's centres, youth centres, native groups, prostitution advocacy groups, doctor's offices, sexual assault centres, gay pride offices, religious organisations, pro-life groups, and pro-choice groups) were used to find interviewees of varying background, the end result is somewhat left open to chance. Each interviewee has until this point been radically different, and each interview has had a particular flavour.

Basic recording tips in order to achieve good sound abound in print resources and on the Internet. Simple advice around always wearing your headphones, and carrying extra batteries and tapes are often on the list. Should one overlook this practical advice, first hand experience around running out of batteries will certainly hit the point home.

First hand experience in producing sound documentaries quickly improves



interviewing techniques. While there are exceptions, as in the case of a conversational interview, it is the non-verbal interviewing skills that require practice. Practical considerations around having an individual identify themselves at the beginning of an interview, writing or recording location notes, or rerecording a segment if an outside noise interferes, save valuable time in the production studio. Even recording 'room tone' for two minutes after an interview, or if a radio was on, recording two minutes without, and five minutes with the radio on provides editing options. (Isay, 2003) A pioneer of sound documentary, David Isay maintains that a microphone should be five to seven inches from subject/interviewee's mouth. He suggests that the microphone never be put down, but always held in your hand. This provides better sound, but it also can also change the tone of the interview, because the media is more present. Depending on the subject matter at hand, the presence of the microphone can make it more difficult for the interviewee to relax.

Above all, it is important to consider the effect that you are looking for. Microphone positions include, on mike- when the performer speaks directly into microphone, off mike- performer is a distance away from mike and audience can hear this distinction, fading on- performer is gradually approaching microphone, fading off- the reverse of fading on, and behind an obstruction-sounds like there is a barrier between performer and audience orientation. (Hilliard, 1985:210) Some of these effects can be constructed through an editing program.

Generally the tips around use of microphone and headphones are important. There are however, exceptions to every rule. If conducting a conversation that you are participating in, the use of headphones has an ability to distance you from the situation. While this is a positive thing in a standard interview session, and always important for quality of sound, if you are striving for an engaged conversation, this distancing can pose a problem. Incorporating good recording habits is important, but once again, flexibility and an ability to follow intuition can at times lead to original and innovative results.

During production, intuition is one of the factors that come into play. Given that a minority of available material is used, production decisions are often subjective. (Dornfeld, 1998:68) Erna Akuginow maintains that "producers rely on reactions to material that are subjective, emotional, and often difficult to rationalize or articulate." (Dornfeld, 1998:81) It is important to use your judgement about the relevance and importance of your chosen material. (Hesse, 1987:85-89)

The end product is not only affected by the choice of sound clips, but is further accentuated by the use of music and sound effects. Music is used as

"content for musical background, theme for program, bridging divisions (I often use music to transition between related subjects), as sound effect, or background and mood." (Hilliard, 1985:211, italics my addition) In David Isay's, *All the Way Broken: Iolene's Story* (1985), Arthur Bloom composed the music specifically for this piece. This accounts for the parallel between the music and emotional content of sound clips. Music can also be used to allow for downtime, processing time for the listener. If too much voice is used, a sound documentary can result in a series of talking heads with limited comprehension. In *All the Way Broken: Iolene's Story* (1985), David Isay takes this concept of processing one step further and uses music between sentences to provide a break.

Musical sound has been used throughout the documentary "Talking About Abortion, A Resurgence in Sound", in an effort to complement the text. This includes instrumental music taken from songs on the subject of abortion, cultural or thematic music, emotional or mood music, and protest sounds. In many cases, these original sounds have been dramatically manipulated in order to achieve the desired effect. Another technique involves word play and layering of text in order to both create an effect and complement the narrative structure.

## **SOUND AND MESSAGE IN THE DOCUMENTARY**

Sound effects are used to "establish setting, direct audience to particular sound, establish time, establish mood, signify entrances & exits, serve as transition between segments of time or place, and to create unrealistic effects. (Hilliard, 1985:210)

Music, sound effects, and to a lesser degree, interviewed material are often conceptualised at a later date, in the editing room, after the general sequences have been constructed. As was the case in *Childhood*, where the producer/directors could define which areas they needed to speak to late in the game, (Dornfeld, 1998:84) I have had to supplement interviews, fill in gaps, and sometimes re-conceptualise "Talking About Abortion: A Resurgence in Sound". It is important to constantly "reformulate intentions while confronting the reality of their execution, and re-script programs while evaluating what 'works' and what does not." (Dornfeld, 1998:85) Production is an ongoing process, one that always requires re-evaluation. The initial conception and reformulation, as Bourdieu maintains, "in both style and content, bear the marks of their authors' socially constituted dispositions (that is, their social origins, retranslated as a function of the positions in the field of production which these dispositions played a large part in

determining)." (Dornfeld, 1998:86)

Throughout the editing and mixing process, it is "not always obvious what it took to get the final result: it can be simple to be complex, and complicated to be simple." (Murch, 2000:1) There are inevitably 'logjam' moments. Decisions, often intuitive, around which sounds should be highlighted and how, must continuously be made. Walter Murch suggests thinking about sound in terms of light. (Murch, 2000:1) At one end of the spectrum of sound is encoded sound (this is speech-a vehicle to deliver code) while at the other end of the spectrum is embodied sound (this is music and is experienced directly). All sounds are found along this spectrum. A sound effect for example, might be found mid-way. For a soundtrack to be balanced, it must be spread across spectrum. (Murch, 2000:2)

Independent of emotional tone, Murch places music on the hot end of the spectrum and speech on the cool end. If a soundtrack was all found on one end of spectrum, it would become 'white noise,' a situation where individual elements cannot be distinguished. (Murch, 2000:5) In his working practice, Murch tends to break his sound down into smaller groups, premixes. He then layers these premixes in order of importance.

"Talking About Abortion: A Resurgence in Sound" uses a number of editing techniques from fades, to speaker play, to layering, to the use of effects. Much of this is decided upon in the editing process, through a practice of conceiving, listening and re-conceiving different ideas. From the smallest editing choices to the overall end documentary, considerations of audience are important.

Producers move in and out of the frame of surrogate audience member. They are able to do this in part because they rely on their own subjectivity in this application, reacting to material they shoot and edit as viewers themselves, and often falling back on their subjective responses to defend these reactions. (Dornfeld, 1998:7)

"Throughout the editing and mixing process,  
it is  
// not  
always obvious  
what it took to get the final result:  
it can be simple to be complex,  
and complicated to be simple."  
(Murch, 2000:1)

Within the construction of the story itself, conscious choices should be made around where you place your audience. Is it more appropriate to place the audience outside the story or take the audience along on the journey? For example, if a car plummets over a cliff, should the audience stay with the car or be left on the cliff side? (Hilliard, 1985:211) There are no easy answers here. However, each choice must be made when conceptualizing and writing the script and each choice should be based on the optimum audience involvement or reaction. This, in and of itself, is hard to predict.

Defining audience in general terms is difficult enough. Stuart Hall (1992) looks specifically at the message, and extends the transmission model to focus on encoding and decoding. He specifically focuses on the decoding of messages, and gives greater agency to the individual and audience in this process. He maintains that despite the intent of the encoder, the individual decoding the message will not necessarily decode it as is intended. Hall provides three ways in which a message can be decoded. They include the dominant-hegemonic position, the negotiated code, and the oppositional code. In the dominant-hegemonic position, the receiver is decoding the message as it was intended in its entirety. (Hall, 1992:136) The negotiated code or position includes adapted or reinterpreted components. (Hall, 1992:137) In the case of the oppositional code the individual will read the message through an alternative framework. In totality the message has been reworked in a way far from intended in the encoding process.

Regardless of the ways in which our media and message might be decoded, we strive to find "a shared identity based on this community's consumption of like programs that appeal to its base of interests and knowledge." (Dornfeld, 1998:61) For the majority of dominant readings of a documentary that might abound, there are always the exceptions, the oppositional readings that may be based on a number of factors that are difficult to predict. Often it is based on authorial assumptions. (Dornfeld, 1998:67)

Through experience, Murch has discovered the 'Law of Two and a Half' in relation to differentiating sound from an individual to a group. In order to indicate a group, for example, a group of people walking, two and a half sets of footsteps are required for the listener to identify the number of people as a group or many. (Murch, 2000:7) More than this, and the problem of white noise enters into the scenario. Ultimately, Murch asserts, one should strive for the "experience to be simultaneously Dense and Clear." (Murch, 2000:9)

There are many editing techniques that are specific to radio. Sarah Fishco, in her short sound piece, *The End*, examines endings. She discusses the different historical endings that have been in vogue and how times have changed. The use of fade-outs and segues have become in and of

themselves endings, a particularity in radio. The use of musical segues has become commonplace, and the possibilities around editing techniques are often limited only to one's desire to research and experiment. Common techniques include the cross-fade (one sound fades, the next grows stronger), blending (two or more sounds at same time), cutting/switching (abruptly moving from one sound to another), and the fade in, fade out (gradual appearance, disappearance of sound). (Hilliard, 1985:211)

### **Hear samples of: "Talking About Abortion: a Resurgence in Sound"**

Maria Clip : 4:05 minutes

Narration/Methods: 1:49 minutes

Ingrid/Manipulation: 0:46 seconds

Man-Human issues: 1:39

"Within the construction of the story itself,  
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or take the audience  
along on the journey? "

### **NEW STYLES OF LISTENING**

Bill Nichols and Vivian Sobchack have developed six documentary 'gazes.' They include the clinical or professional gaze: objective reporting and non-interventionist, the accidental gaze: happens to catch important action, the helpless gaze: intervention desirable but impossible, the endangered gaze: shows own personal risk, the humane gaze: extended subjective response to the moment or process of death, and the interventional gaze: abandons the distance between filmmaker and subject, tries to intervene. (Williams, 1999:177) While Williams' humane gaze is only in relation to death, it can and should be reinterpreted to include suffering and in this way, is one of the gazes employed in Talking About Abortion, A Resurgence in Sound. The primary gaze used is the clinical or professional gaze because all interviews are after the fact of an abortion and my intervention is limited.

"It is relevant here  
to conceptualise  
Nichols and Sobchack's  
'gazes,' as 'listenings.'

While not directly interchangeable,

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can further extend the concept of different approaches to one's subject."

## **CONCLUSION**

Storytellers choose stories that reflect what is inside them and every time it is important to ask, "why this story, what is there of me inside it?" (Schwartz, 1994) Increasingly, my stories come from a private place, with private motivations. I am a private person and this is a difficult process for me, to share my stories, to share myself. However, I am realizing that it is the personal stories that are often superior and that continue to move me forward in terms of skill and accomplishment. These are the stories that hold interest for others. They are stories of learning and discovery, not only for myself, but for the listener as well. This is my intent with "Talking About Abortion: A Resurgence in Sound".

The realization around the importance of story is key in documentary. While it is often a 'fact' based genre, techniques around learning how to reveal secrets slowly and creating suspense only improve the end product. (Schwartz, 1994:2)



Intervention is possible in an emotional sense if an interviewee has an emotional breakdown. This is not to suggest that I would have the ability to take on the role of a counsellor, but providing space and time for recovery by pausing, postponing, or leaving an interview unfinished is an intervention of sorts. It is relevant here to conceptualise Nichols and Sobchack's 'gazes,' as 'listenings.' While not directly interchangeable, these 'listenings' can further extend the concept of different approaches to one's subject. A professional listener can be largely interchanged for the clinical or professional gaze. Other 'listenings' might include the curious listener, the critical or analytical listener, the therapeutic listener, or the confessional listener. The critical or analytical listener may take on a proving, almost combative role as in the documentary, Democracy on Trial: The Morgentaler Affair 1970-1976 (1984). The interviewer often employed an argumentative style with Morgentaler, which, because he was up to the challenge, allowed him the space to engage with the issue further. In my documentary, I often took on the role of the therapeutic listener. Participants involved reported that the interview itself provided a cathartic role, not only to tell their personal story in an open environment, but also because of the sense of strength derived from the possibility that others might hear their story and have it affect their life choices. Many of the women did experience emotional breakdowns throughout the interview, and because there was no time limit, had the space within the interview to reflect on their experience in new ways. When I asked probing or reflective questions, this sometimes encouraged the interviewee to think about their experience in new ways. During the

Interviewee	Year	Duration
1. anna cuts	1987	2:40
2. betty	1969	2:29
3. debby cuts	1963	4:40
4. joyce cuts	1988	2:58
5. lesley cuts	1988	4:19
6. linda cuts	1990	6:13
7. linda garrine cuts	1990	7:43
8. megan cuts	1999	4:47
9. paddy cuts	1970	5:03
10. radio show	2003	10:13
11. radio show	1969	2:29
12. radio show	1969	4:00
13. radio show	1969	3:56

... of medical profession - public co  
 ... college of physicians + sur  
 ... training institutions.  
 ... microsome  
 ... stops DNA replication  
 ... to most rapidly growing tissue is  
 ... is an anti-proliferative - factors st  
 ... growing - begins to detach from strom  
 ... betty cuts > unfinished.  
 ... can shift the entire multi  
 ... session in time. Select Edit/ins  
 ... Betty & talk show Dave Abbott  
 ... told folks about sterilization  
 ... people called in asking for more in  
 ... abortions - started from there  
 ... at Vic High.  
 ... summary:

interviews, it was a one-on-one dynamic (not possible in film, or not easily possible. The fact of more than two individuals changes the dynamic in the room). The location was always my own home or the interviewees own home, whether they were in person or over the telephone. I would

open the space for the individual to tell their story, often used silence or long pauses as a tool, not filling it, but allowing the interviewee to collect her thoughts and move in a direction that was good for her. Generally, I kept my reflective and clarifying questions to the end.

At the end of the interview process, I would ask the participant how the experience of telling her story was. The reactions were positive, including: "I found it... it was neat. It was nice to just talk. I didn't know how things were going to come out or how I was going to say anything, but it just did. So it was just nice. It was comfortable. It wasn't awkward at all. It wasn't even painful." (Erin, personal interview 2004) Another response was: "If I did have any repressed feeling about it, it might bring out some emotions. But I don't feel that way. It just makes me feel... that's what I did and I'm ok with that." (Michelle, personal interview 2004) All women were appreciative of my work and thanked me for the opportunity. Even if their story was not used, they had the chance to tell their story in full, without interruption, without judgement, and this seemed to provide a cathartic, emotional release for many. In particular circumstances, I took on the role of a confessional listener. Here, I would begin, or sometimes finish by telling a personal story myself. The story was always relevant to the situation at hand, but I could see that it effectively worked to strengthen the bond between interviewer and an interviewee. In other situations, the women involved were intent on telling their own stories. It is not only important to conceptualise the various 'gazes' or 'listenings,' but to use the various techniques as they are appropriate to each situation.

Stephen Schwartz thinks of radio documentary as a composition, a manipulation of reality that is about the overall effect rather than each specific moment in time. "Trying to create visual images that move like a piece of music can make a lasting impression." (Schwartz, 1994:4)

Thinking about the creative, technical, monetary, ethical, theoretical, and practical choices that need to be made when engaging in the practice of sound and film documentary has been valuable in further conceptualizing "Talking About Abortion: A Resurgence in Sound". The aesthetic approach allowed more room for my own interpretation of the raw interview material, existing material, music, and sound effects. While keeping the generalizations of audience in mind, it allowed me to strive for a creative interpretation that continues to push the lines of documentary, encourage listeners to critically engage with the subject matter, and make a lasting impression.

Above all, "Talking About Abortion: A Resurgence in Sound" invites listeners to think about the complexity that still exists around abortion and how it has



historically changed in the lived experiences of women. It works to move thought and discussion on abortion beyond the moral dilemma, into issues of access, stigma, and a re-conceptualisation of abortion from a woman's issue into a human issue. The intended result is an interweaving of voice into a tapestry that reveals the complexity of the subject, diversity of experience, and the message that abortion as an experience and as a concept is constantly evolving, in terms of legality, societal taboo, and psychological outcome, whether it is in the public eye or not.

"Talking About Abortion: A Resurgence in Sound" brings abortion back into the public eye, encouraging people to think and speak about the issue again. This written work has provided a discourse analysis around abortion, illustrating the absence and consequent need for new media on the subject. It has also provided a space to examine some of the theoretical, ethical, technical, and practical considerations that went into the production of "Talking About Abortion: A Resurgence in Sound". The written component and the documentary itself, provide a beginning to the resurgence in sound, thought, discussion, and vision that are needed to fill the void.



### **SHELLEY CRAIG: MOTHER, TEACHER, RE-RECORDING MIXER**

*The first woman to graduate from the Tonemeister Master's Program at McGill University and one of only two or three female re-recording mixers in North America, Shelley Craig is a talented mixer who has earned the respect she holds among members of the Canadian film community.*



It's Friday evening at the National Film Board in Montreal and Shelley Craig is working the evening shift again this week. Craig is a re-recording mixer for the National Film Board of Canada (NFB). Her job is the final stage of film sound production, as she puts it, much like the birth of a film.

Craig is putting the finishing touches on a mix that she has been working on all week. Right now, she's inserting the sound of a chicken clucking into the film. Craig glides over to a computer next to the mixing board, taps into the NFB's sound effects library, and chooses three or four samples of chickens clucking. She places one of them in the film's timeline and plays it back. The director is deceived thinking that it was there to begin with, and Craig smiles. She didn't need to see or hear the scene, she just put it in and it worked. Her proficiency is astounding. Craig mostly chalks it up to luck but this is the luck of an expert—a professional in her field.

When Craig begins working on a project—more often than not a film that she has never seen before—she watches the film for five minutes then starts mixing, following the instructions the sound editor has left her, in the form of cue sheets. Though these cue sheets list the sounds on each track, and when they are



supposed to begin and end, her creative touch is present in every film she mixes. All of Craig's mixes are made DVD-ready, in 5.1 sound, and all decisions about spacialization are hers. Using panning, equalization and reverberation, she can choose to put a bird whistle in the left surround, a train slightly off center to the right or make a voice sound like it's coming from another room. She creates the environment that brings audiences into the world of the film they are watching—a soundscape composer for images. Craig's work breathes life into the edited sound of films but she recognizes that the sound she is given at the outset is crucial for her job to be successful. Craig recently worked on a film called *War Hospital* (2005, Dir. Damien Lewis and David Christensen), which is a documentary on the Red Cross Loki Hospital in Northern Kenya, where the wounded from war-torn Sudan are cared for.

The sound design and location recording of John Blerot made Craig's job a pleasure as his soundscapes were rich and full, having all been recorded on

location at the hospital. The opening sequence to this film (please listen to an excerpt on the accompanying audio CD) is a good example of the magic that can happen when good sound recording meets good sound editing meets Shelley Craig. The location recordings are not only true to the images on the screen but they represent the time and space of the film and can be listened to without the images as a successful soundscape composition. This is in large part due to the specialization techniques employed by Craig that the feeling of being in that space is actualized. You can hear helicopters up in the sky, off to one side or the voice of a hospital volunteer calling from behind you which makes the film more real, giving the sound a finishing touch that draws patrons eyes to the screen and opens their ears to the sounds around them.

Tonight, Craig finishes off the mix she is currently working on and the director leaves happy. Almost every week, Craig is handed a new project that some director has put his or her heart and soul into. It is her job to finish it off with the same level of dedication and energy that it deserves. "It's the end of the creative decisions," she said. "It's a very special time."



### **ABOUT DIANE LEBOEUF**

Diane Leboeuf's earliest memory is of sound. Nearly legally blind since birth, Diane's hearing has guided her through life but this tool for survival has grown to be her passion and life's work. Today, Diane is the president of her own company, Sono design, in Montreal. She is an accomplished museum sound designer and her team at Sono design has received numerous awards and honours for their sound and multi-media work. Diane began working in sound as an engineer for live shows but would later discover her affinity for the world of museum sound and multi-media installations for the web. No matter where her career has taken her, a love for sound has propelled her to work hard, despite obstacles such as gender discrimination, and allowed her to focus on fruitful collaborations with other artists and professionals.

## WEB LINKS

McCord Museum's Urban Life Through Two Lenses

[www.mccord-museum.qc.ca/urbanlife](http://www.mccord-museum.qc.ca/urbanlife)

Sono design

[www.sono-design.com](http://www.sono-design.com)

## ABOUT THE AUTHOR

Lisa Gasior has been hearing since birth but started listening about 4 years ago. She is pursuing M.A. in Media Studies at Concordia University. Her work includes numerous electroacoustic pieces, soundscape projects, and soundtracks for film and video. Lisa is a research assistant for Dr. Andra McCartney, a teacher's assistant in sound production at Concordia, and has done research and writing for the Soundscape Journal. Lisa hopes to introduce others to the joy of listening and find beautiful soundscapes wherever she goes.

*This feature was written in the framework of Dr. Andra McCartney's Dedans et Dehors le Studio project—a multi-university ethnographic study of women sound producers.*

## FROM MIXING BOARDS TO MUSEUMS



It was long before Mesopotamia or Ancient Egypt that goldsmithing first began along the shores of the Black Sea, in the land we now know as Bulgaria. Just a few kilometres from the city of Varna, a Copper Age cemetery was discovered to contain the oldest gold objects ever discovered, dating back to between 4600 and 4200 BCE. These precious items,

excavated between 1972 and 1990, along with other ancient artefacts are housed at the Varna Museum in Bulgaria.

In 2002, a collection of these artefacts dating as far back as 6000 years were

shipped from the Varna Museum to Montreal. It was at the Pointe-à-Callière Museum that Varna – World's First Gold, Ancient Secrets allowed visitors to walk through Bulgaria from the present to the very distant past.

Diane Leboeuf, president and artistic director of Sono design, was in charge of the sound design for the Varna exhibit that took place from November 2002 through May 2003. She was one member of a team that would bring Varna to life.

Diane's work began with doing research and asking questions for the first three to four months. She looked at the objects of the exhibit to see if any of them relate to music. "6000 years ago, what kind of instruments were there? Clay instruments, sheepskin, bamboo..." she pondered. Diane also decided that water should feature prominently in the sound design as she found that blues and greens, signifying water, were prominent colours featured in the artefacts. This was due to the fact that Varna had, at one time, been completely submerged by the Black Sea.

Her research involved listening to a lot of Bulgarian music, to discover what makes it specific and unique. This research also related to what the director of the exhibit wished to convey. What would be the mood or setting of the exhibit? Working very closely with the director of the Varna exhibit, it was decided that Diane's job was to give the visitor a sense of mystery. Her sound design kept this in mind: "You have to put the visitor in the mood to discover."

For Diane, this meant slowing down the traditional Bulgarian music and being aware of the low frequencies, not only to create this sense of mystery but to allow the visitor to be comfortable to read about the artifacts in the environment. For Diane, the sound had to create an ambience: "The content was already very demanding so the sound would have to be there as atmosphere."

Diane worked with her brother, Gaetan (with whom she has been working for about 20 years), as well as vocalist Karen Young who helped choose the songs, did the arrangement and sang in most of the sections along with her daughter Coral Egan. While not all of the instruments recorded were historically accurate, the musicians who played for the soundtrack were of Bulgarian origin, the Markov Brothers. The music was recorded and mixed by one of Sono design's freelance sound engineers, Steve Bellamy.

The result of this collaboration was a mix of traditional Bulgarian music, with instruments and voice, that could be heard playing over the sound of the surf. There was also a mysterious drone composed of three different instruments, including a dijeridoo which is not characteristic of ancient




Bulgaria. Diane had also tried using an authentic Bulgarian instrument made of sheepskin, something like a bagpipe, but found that “the real thing didn’t work,” as is the case so often in the world of sound design. She also had to assure that the drone was not at the same frequency of the room’s ventilation so that it would not be completely masked, as had happened to Diane in the past.

There were a few very important considerations for Diane. Most importantly, that she would be using two different soundtracks, playing simultaneously for two different sections of the exhibit with no walls separating the sounds from bleeding into each other. This allowed the exhibit to be very unique for the visitor: As the two sound loops were different lengths (one was about 8 minutes and the other about 21 minutes), the soundtrack would always be slightly different. The visitor was always able to hear both soundtracks playing but depending on where they were in the exhibit, the balance between the two would change. For Diane, this meant constantly keeping the spatiality of the room in mind, designing the sound in such a way that the visitor, who moves through the space hears what Diane wishes the visitor to hear – a challenge in contrast to the fixed state of a movie-going audience member.

Visitors to the museum don’t necessarily know the beginning, middle and end of Diane’s work. “The first impression, the beginning, is important to the client so you have to consider what will please them,” she said. “But the visitor will be entering at a random moment and that must be taken into consideration as well.” The mobility of the visitor is also an important factor – they are rarely sitting down as an audience member in a theatre. Furthermore, the sound design must enhance the atmosphere of the exhibit without intruding on the visitors’ ability to concentrate.

Her work features collaboration among different people involved and a sense of cohesiveness among the various sounds – this is essential for her work to be a success.



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## **LISTENING AND MEMORY**

Listening has always been important to Diane. Her first memory is of sound. She remembers the sound of a saw, close to her body, ready to cut through the plaster cast on her leg. She was crying. Her young, sensitive ears were exposed to this noise, loud and terrifying, that was so close to her body. Diane had been put in a cast because doctors couldn't figure out why her knee had been ailing her. She was in a cast for a few months and when it came off, she was fine. This memory was especially terrifying because she was nearly legally blind. Diane started wearing glasses when she was two and a half but they still didn't correct her sight properly. When she started school, she had to sit in the front row in class but even then she couldn't see everything. Her hearing has guided her throughout her life.

This year, Diane's company Sono design is celebrating its fifteenth anniversary and has established a long list of satisfied clients. Sono design now has a team of staff who specialize in sound design, mastering, video, multimedia and, most recently, DVD creation. Of course, this success didn't just fall from the sky. Over the years, Sono design has expanded to accommodate growing demands. Recently, Sono design moved into a loft space that had to be redesigned by an acoustician to accommodate the demands of sound production – isolated sound booths, a control room for designed surround sound and other specifications to insure that the outside sounds wouldn't penetrate. Prior to that, Sono design was housed in Diane's apartment: offices in the living room, recording rooms in the kitchen and the hallway that provided an excellent acoustic.

Diane's work and persistence in her field of sound design established her company and remains the driving force behind its success. Her love of sound, which began as a tool for survival has grown to be her passion.

Diane's early encounter with gender discrimination would repeat itself in various forms throughout her career. It was always stressed that girls don't do sound. One day, Diane was speaking with a female musician who said that she needed a sound engineer for a live show. Diane offered to work the gig, which led to an interesting experience of gender discrimination. When she went to rent out the equipment for the show, Diane was told by the guys at the store that girls don't do sound engineering. Her response was clear and assertive, "I do." They told her that to be a sound engineer it was required to be able to lift a certain heavy speaker box. Instead of helping her lift it as they would ordinarily, they made her handle all of the weight, so it was very difficult. This was, of course, offered as a good reason why women can't do sound.



Once again, Diane persisted despite being told that she was entering a field where she was not welcome. She tried to get into music recording studios as well as film sets to observe engineers at work and she found that some studios were more eager to have her than others.

At one studio, they told her that a woman would “disturb the guys.” She was told that, sometimes, the guys – musicians – get warm and they want to feel at ease removing their shirts when they’re playing. Besides, as she was told by another studio, the microphone stands are too heavy for women to move around.

In 1981, Diane returned to Studio Tempo, one of the studios that had allowed her to observe their work. Diane found the chief engineer to be intelligent and she liked the ambience of the studio so she was very happy when she was offered a job there as assistant engineer.

Music was always a presence in Diane’s household as she was growing up. Her mother loved to play the piano and Diane attributes her love for music to the listening experiences of her youth. Diane began her musical career as a child with classical guitar lessons. While she enjoyed making sounds, she hated reading music. One day she forgot her glasses at home and told the teacher that they were broken so he taught her something by ear. This continued for about two months when the teacher told her that she had to read music for classical guitar. She told him that she preferred to learn by ear but he refused to do so. Diane never returned to his lessons.

She moved on to the flute, clarinet, saxophone, drums, and congas but she never played these instruments for more than a few months. She realized that she loved experimenting with sounds – that’s what really excited her.

Diane also played around with tape recorders – which got her in trouble with her grandmother. When she was 12, she recorded her grandmother forbidding her to record her and then played it back for her grandmother to



hear.

Diane encountered instances of gender discrimination before her career even began. When she was 18, Diane was dating a musician who played in a band. She said that she wanted to be their sound engineer but they simply refused – chuckling at the idea. Although this event didn't discourage Diane, it was a good example of the popular belief that only guys did sound. This didn't stop Diane. She is persistent. Diane began attending classes in Communication Studies at Concordia University. She also volunteered at the campus radio station where she learned to solder equipment racks. It was around this time, in 1979, that Diane managed to get some work with several bands, using a particular bargaining technique. She would go to small live shows with a case of beer and talk to the guys, asking them to show her different things about the set-up and the equipment. Diane started hanging around local musicians, acting as a sound engineer, even though she had no formal training.

It was her persistence that got her the job. She stayed at Tempo until 1983 when she felt as though she had hit a wall. Despite the fact that Diane was promoted to engineer, it seemed that her coworkers as well as clients would always see her as an assistant.

In 1984, Diane was asked to work on the soundtrack for a live dance performance. This is what triggered her career as "business woman," as she went out to buy her own equipment. Having her own equipment was a way of asserting herself and being taken seriously, not only as a business woman but as a serious sound engineer, something for which she had been struggling.

From there, Diane was able to work on live shows such as Le Printemps Electroacoustique, the Montreal International Jazz Festival and the CFCF Téléthon des Étoiles. At the same time, she was working on sound recording for television on a number of dramas and roundtable, political discussion programs for PBS and Radio-Canada. Diane's career also brought her back to the academic world as she taught workshops in sound for theatre and dance at Concordia University, Université de Québec a Montréal as well as several CEGEPs (colleges).

It was in 1987, that she completed her first sound design for a museum, an exposition called Souffrir pour être belle (suffer to be beautiful) that was at the Musée de la Civilisation in Quebec City. This exhibit showcased some of the rituals that women and, to a lesser extent, men put themselves through to be beautiful and how these rituals have changed over the course of time. Having worked mostly in theatre prior to this, Diane was introduced to the

challenges of museum sound design – open rooms where soundtracks can bleed into each other, finding the appropriate loop lengths for the soundtracks, and developing rhythm to put the visitor at ease.

This experience was it. Her love for working in the museum environment, in a multidisciplinary context, was born.

## **SONO DESIGN - THE PRESENT AND THE FUTURE**

The seeds for Sono design were planted in 1985 when Diane started up a company called Audio Design, that focused on sound for stage productions. It would undergo changes, including a rebirth as Sono design in 1989 and a change in mandate that focused on sound design. Her first projects included soundscapes for Expotech in the Old Port of Montreal (recreating sounds of the evolution of mankind), and an exhibit called *Il était une fois l'enfance* at the Musée du Bas du Fleuve here she recorded children talking about fear, joy, and love.

She has collaborated on over 150 productions for different museums including the Varna exhibit at Pointe-à-Callière. Sono design worked on the visual concept and sound design of the Cirque du Soleil's satellite shows for the VIP tents for Alegria and Varakai. For Varakai, Diane worked in a team that was responsible for the design of the tents – allowing the VIP ticket-holders to experience something very special besides the actual show. Diane's role was to create the videos and soundtracks for which she decided that it would be interesting to make remixes of the music of Cirque du Soleil. DJs from around the world were asked to remix certain tracks for Varakai's VIP tents and these tracks were eventually compiled onto a CD. Diane has also collaborated with the Ename Center in Belgium, the National Capital Commission in Ottawa, the Montreal Botanical Gardens, Parks Canada, and her team at Sono design boasts Walt Disney as one of their clients, doing the surround and stereo mixes for French translations of their films on DVD in Quebec. *Market Day, 1750*, a multimedia production that Sono design produced for the Pointe-à-Callière Montreal Museum of Archaeology and History, won recognition by the Canadian Museum Association and by the American Association of Museums.

Diane's current project has her working with the Musée de la Civilisation in Quebec City once again. The exhibit is called *Lumieres* (lights) and it will trace the history of light. In one of the rooms, the story of fire will be told from the beginning – man discovers fire, man learns to feed the fire, carry fire, make fire and so on. In creating the soundtrack for this room, Diane and her team have decided that fire will be the narrator so one of the challenges

at hand is choosing the voice. "What would fire sound like, talking to you?" Diane questioned. "Is it a man? Is it a woman? Does it have many voices?" We will have to wait, see and listen!

## **GROSSE ÎLE**

Diane's work for the exhibit at Grosse Île opened about five years ago and is still running at this national historic site of Canada. From 1832 to 1937, Grosse Île was a quarantine station for the Port of Quebec where immigrants would stop to be inspected for illnesses such as typhus and consequently disinfected.

If you visit Grosse Île today, you can live the experience of those people who stopped there on their way to a new life. Diane created nine different soundtracks that are triggered by an infrared signal as visitors walk through the exhibit. These soundtracks allow you to hear the stories of Irish, Scottish, Polish, and Russian immigrants, to name a few, as well as experience the 1% mercury solution shower that they had to go through, step by step.

Diane's work involved a lot of research into the lives and stories of the people who passed through Grosse Île. To recreate the testimonies, she hired about 30 people who read the script written by Sono design for the exhibit. Diane boasts that these people were not actors but regular people who were like extras for her sound design. She rented a large room with creaky, wooden floors where she recorded her extras walking around, speaking in their native languages. She also recorded professional voice talents telling stories in English and French that she layered on top of the previous recording. The exhibit also included preparation for the shower and then the shower itself that Diane recreated by bringing large metal sheets into her bathroom to make the sound of water in the metal showers of Grosse Île. From beginning to end, the soundtrack lasted about 35 minutes and, no doubt, it helped to bring these rooms back to life for visitors.

## **URBAN LIFE THROUGH TWO LENSES**

Diane's museum work is not restricted to live exhibits. She also does virtual museum sound design. She has collaborated with the McCord Museum in Montreal on a number of online exhibits that mainly focus on Canadian history. Diane is happy to report that the McCord Museum is "avant guard" in terms of sound production in their exhibits. For the last three years, Diane has been working on a project called Keys for History in which the images have been put to sound as opposed to the traditional way of working where

sound is put to the finished image.

Urban Life Through Two Lenses is an online exhibit that unites Montreal, then and now. It is a series of photographs of 34 Montreal locations, taken by William Notman in the nineteenth century and again by Andrzej Maciejewski, 100 years later. Diane's job, with her brother Gaétan, was to reconstruct the sounds of these places, listening to the soundscapes of today and imagining, with clues from the photographs, what it would have sounded like 100 years earlier. Online, by running your mouse over the pictures, you can hear Diane's recordings of today and her recreations of the past, and notice how the soundscape has changed. For example, in one image of Montreal as seen

from Notre Dame Church, we can hear the sounds of seagulls and steamships that come from the harbour but in the image from today, the rumble of the city masks the gulls and the steamships can no longer be heard. A sound that links the past with the present is the church bells.

The exhibit allows the viewer to browse the images and hear the sounds while reading short texts from the perspective of the historian, the museologist and the photographer. The perspective of the sound designer is absent but Diane was quick to point out that she is saying a lot more through her choice of sounds and her recreation than the photographer who simply stated the location of the photograph. It is by listening that we are made aware of how the city now rumbles with car traffic in place of the whinnies and trots produced by horse-drawn carriages.



It has been online for over two years now with the benefit that you can

browse the site in your own home, properly listening to the individual sounds, making your own comparisons of the past and present-day sounds. It's the perfect outlet for museum sound and Diane is happy to report that many of the museums she works with can no longer imagine an exhibit without sound.

## **COLLABORATION AND HELPING OTHER WOMEN**

Diane talks about building long-term relationships with her clients, getting to know each of them and exploring new possibilities for future projects. Collaboration is one of the greatest benefits of her work, along with the fact that it is her job to create art on a daily basis. Throughout her career, Diane has felt that being a woman made her stand out – negatively at the very beginning but increasingly more positively over the years. When she was going from studio to studio, looking for work, she put pressure on herself to represent all of womankind in the world of sound production. She felt that she had to represent women positively, so that the studio would be more open to hiring women in the future.

It's tough to imagine representing all women on top of the pressure of the job. Diane explains her technique, "You have to be less emotional – you can't be too angry or you will be a 'hysterique.' You can't be too timid either. You have to find a balance but you have no model because you're the first one doing it."

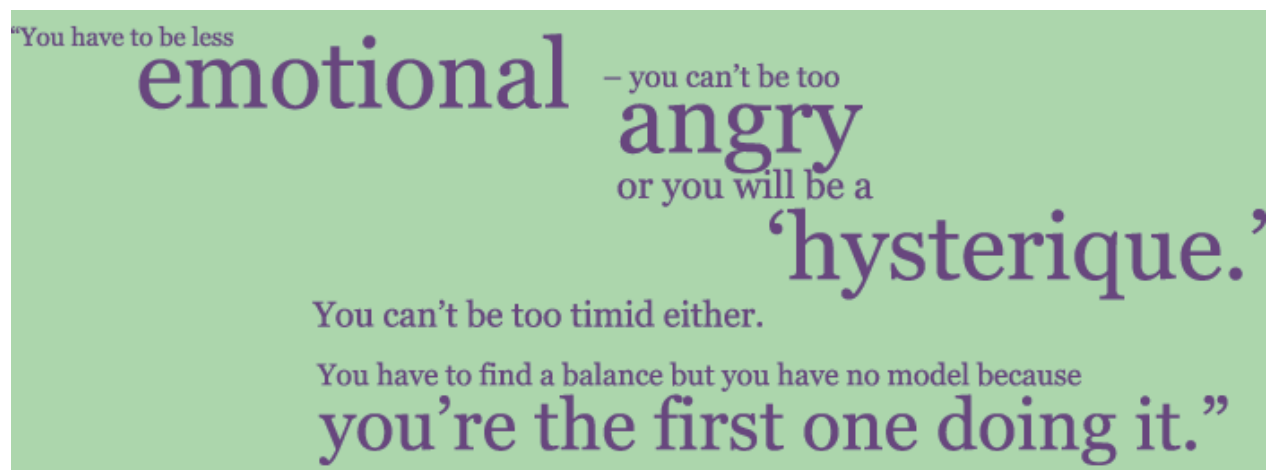
For many women, this can lead to role playing in the workplace. At first, Diane thought she had to act like one of the guys, until she discovered it was unnatural. She said to herself that she would be herself and if it didn't work after a year she would try something else. Thankfully, today at Sono design, she doesn't have to be anything but herself.

For many women, this can lead to role playing in the workplace. At first, Diane thought she had to act like one of the guys, until she discovered it was unnatural. She said to herself that she would be herself and if it didn't work after a year she would try something else. Thankfully, today at Sono design, she doesn't have to be anything but herself.

"Everyone is ok with me because I choose the people I work with," said Diane. "Also, in the museums, there are a lot of women." This proves to be an added bonus for Diane as the women of the museums like to see another woman in charge of a technical aspect such as sound. Generally, many women for whom Diane works are not at ease with technical material and when they see that Diane is, they become more comfortable. It puts them at

ease and Diane explained that one way she strives to make a difference is that she will take the time to explain technical aspects of a project so that her collaborator can fully understand what is being done. Many of Diane's competitors are men, and her female clients say that they don't get such explanations from guys.

Diane was the first woman to do CD mastering – back in 1990 – and her studio was the first in Quebec to do digital CD mastering. Diane is now trying to show other women that they are not alone in the world of sound. The success of Sono design really speaks for itself. In today's digital world, where the equipment is smaller and lighter, obnoxious guys would have more trouble finding something too heavy for her to lift.



## **:: AUTRES PARTICIPANTS ::**

**Creating Worlds For My Music to Exist: How Women Composers of Electroacoustic Music Make Place For Their Voices** ([Master's Thesis](#), Music. York University, Toronto, Ontario)

For this study, I have interviewed fourteen women composers of electroacoustic music in or near the three Canadian urban centres of Montreal, Toronto, and Vancouver. Montreal: Claire Piche, Lucie Jasmin, Pascale Trudel, Monique Jean, Helen Hall and Kathy Kennedy; Toronto: Gayle Young, Sarah Peebles, Wende Bartley, Elma Miller, Ann Southam, and Carol Ann Weaver; Vancouver: Hildegard Westerkamp and Susan Frykberg. These interviews were all conducted between January and November of 1993. References to the development of electroacoustic music in Canada are sparse in the existing literature, both in general histories of electroacoustic music, and in histories of Canadian music. And even though there seem to be some areas of change (for instance, recent publications in Quebec), women composers are under-represented in writings and recorded collections of electroacoustic music in Canada. Here, I situate the work of women composers in the Canadian scene, discussing particularly the work of Norma Beecroft, Marcelle Deschenes, Diana McIntosh, and Micheline Coulombe Saint-Marcoux.

Below is more information about project participants.

### **Frykberg, Susan. MA (SFU)**



Pascale Trudel, compositrice et artiste multimédia, est née à Québec en 1964. Depuis 1986, ses oeuvres (musique et/ou art Web) ont été présentées en concert, à la radio, sur disques compacts, dans les galeries d'art et musées, de même que sur Internet dans plusieurs pays.

En 2003, elle était invitée au festival Tone Deaf à Kingston (Ontario), elle y a présenté une performance de musique improvisée à partir de sa propre Banque sonore avec son ordinateur portable. À Montréal, en 2002, elle réalisait et performait *Acqua Alta*, un projet multimédia incluant



musique, texte et animations dans le cadre des HTMLles (2002) à la Société des Arts technologiques (SAT).

Elle signait Constellations en 2001, une installation Web, pour Les HTMLles, le Festival de cyberart du Studio XX (2001, à la Cinémathèque québécoise. En 2000 elle performait sa pièce de musique électroacoustique Soleil qui inonde mes mains lors du concert Rien à voir (8), dans le cadre du festival SuperMicMac au Musée d'art contemporain.

### **Pascale Trudel**

(<http://www.cam.org/~sdragon/>)



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## **Diane Labrosse: compositeure et interprète**



Diane Labrosse travaille le bruitisme et la spatialisation utilisant principalement l'échantillonneur numérique. Depuis 1985, elle se produit régulièrement sur les scènes de musique actuelle et improvisée à l'étranger. Ainsi, elle a participé à

des festivals en Europe, au Japon, en Australie, au Canada et aux Etats-Unis. Depuis dix ans, elle a créé des musiques pour le metteur en scène Robert Lepage (*Zulu Time*, *La Géométrie des miracles*), les chorégraphes Andrew Harwood (*Ah Ha Productions*), Deborah Dunn (*Trials and Eros*), Richard Siegal (*Frankfurt Ballet*), ainsi que pour des ensembles de Montréal, Toronto et Vancouver. Elle a également créé des installations multi-média pour Tura-ya-moya (Danemark) et Theatre Cryptic (Écosse). Sa discographie comprend plus d'une trentaine de disques dont la plupart se retrouvent sur l'étiquette Ambiances Magnétiques.

## **Diane Labrosse: composer and performer**

Working mainly with samplers, Diane Labrosse approaches music with unconventional sounds and noises. Since 1985, she has been performing regularly on the scenes of conceptual, avant-garde and improvised music around the world. She has taken part in many renowned festivals in Europe, Japan, Australia, Canada and the USA. As a composer, she has created music for theatre director Robert Lepage (*The Geometry of Miracles*, *Zulu Time*), for dancers/choreographers Deborah Dunn (*Trials and Eros*), Richard Siegal (*Frankfurt Ballet*), Andrew Harwood (*Ah Ha Productions*), and multi-media installations Tura-ya-moya (Denmark) and Cryptic (Scotland) as well as small ensembles from Montreal, Toronto and Vancouver. Her discography comprises more than thirty recordings, most of which can be found on the Montreal independent label, Ambiances Magnétiques.

**Sarah Peebles: Composer/performer (Studio Excelo “time-based art with a creamy filling”)**



Sarah Peebles is a Toronto-based American composer, performer, and broadcaster. She pursued violin, composition, and theatre studies in her native Minneapolis, MN, and received a Bachelor of Music degree in composition in 1988 from the University of Michigan’s School of Music at Ann Arbor.

Peebles studied traditional and contemporary Japanese music at Toho Gakuen School of Music (1985), and studied and performed traditional and contemporary music in Japan independently and as a Japan Foundation Uchida Fellow over extended periods between 1985 and 1993.

She has composed for electroacoustics, small ensemble, dance, installation work, video and film, animation, inter-disciplinary collaborations and music-theatre. Her current music focuses on computer-assisted composition and improvised performance using Max programming with internal sampling software, often together with live and/or prerecorded shô (Japanese mouth-organ), and often explores alternative performance settings, such as museums, bamboo groves, temples and parks. She is a member of “Smash and Teeny” (with guitarist Nilan Perera) and “Cinnamon Sphere” trio (with Perera and calligraphy performance by Chung Gong Ha).

Her works have also been performed in Montréal, Banff, Calgary, New York City, Chicago, Minnesota, California, New Melbourne, Mexico, London, Ghent and Barcelona, among others. Sarah Peebles is a member of SOCAN for Canada and ASCAP for the rest of the world.

## **Monique Jean**

([http://www.electrocd.com/bio.f/jean\\_mo.html](http://www.electrocd.com/bio.f/jean_mo.html))



Monique Jean lives and works in Montreal. She studied electroacoustic composition at the Université de Montréal under the supervision of Francis Dhomont.

In addition to her acousmatic compositions, her work is also regularly

associated with video and experimental films, with dance and with installations. Her harbour symphony "L'Appel des machines soufflantes" (The Call of Blowing Machines), a commission of Radio Canada, was premiered in

March 1998 at the Port of Montreal and in 1999 she was an invited composer during the "Rien à voir (5)" concert series produced by Réseaux (Montreal).



Finalist in the Ciber@rt (Valencia, Spain, 1999), Musica Nova (Prague, Czech Republic, 2001) and Bourges (France, 2002) competitions,

her works are regularly performed and broadcast during numerous national and international concerts and festivals.

### **Claire Piché: L'ambiophoniste**

L'ambiophoniste Claire Piché travail actuellement à la rédaction d'une thèse doctorale intitulée *L'espace du son : de la scène auditive médiatisée à l'audition cognitive*. Le texte intégral de la thèse sera disponible en ligne au printemps 2005.

#### ACTIVITÉ interactive en AUDITION COGNITIVE

L'activité *Chalet de la montagne* met à l'épreuve votre habilité à ordonnancer correctement l'étalement des plans sonores sur l'axe proche/lointain. À gauche de l'image centrale se trouvent 6 plans sonores présentés dans le désordre alors qu'à la droite se trouvent 6 plans visuels ordonnancés dans l'ordre, du plus près (1) au plus loin (6). À titre indicatif, chacun des plans visuels inscrit la distance réelle comprise entre le microphone et le locuteur lors de la prise de son effectuée *in situ*.

Mettez à l'épreuve votre acuité auditive: <http://www.ambiophonie.ca>

#### HUMANITARIAN ACTION

The production of the [Agape Kids' Well-being video](#). My niece Nancy volunteered in KwaZulu Natal taking care of orphans in september 2004. She came back with a newly found purpose in life and communicated it to me: promoting awareness of the AIDS epidemic in South Africa and finding a means of raising money to help care, and improve the lives of orphans affected or infected by HIV/AIDS. This is how I also became passionate about the cause and as a first concrete contribution, I produced images and sounds in hand, of an audiovisual document to be put on the Web.

This video was sent in November 2004 as a presentation to be on Oprah Winfrey Wildest Dream Show.

## **::LIENS/INFO::**

### **::PARTICIPANTS ONLINE WORK::**

[andrasound.org](http://andrasound.org) : Andra's homepage. / La page web d'Andra (bil)

[Lachine Canal:Journées Sonores](#) : Projet de recherche d'Andra basé sur des marches sonores au Canal Lachine, Montréal, PQ. / Andra's soundwalk-based research project on the Lachine Canal, Montreal PQ. (bil)

[i8u.com](http://i8u.com) : I8U is rapidly gaining ground as one of experimental electronic music's most intense live performers. Her set...involves the audience in a physical environment of sound and light, and promotes true communication between the artist and listener." / "I8U gagne rapidement du terrain comme l'une des plus intenses interprètes en spectacle. Son répertoire... amène l'audience dans un environnement physique de sons et de lumières, et fait la promotion d'une vraie communication entre l'artiste et l'auditeur." (bil)

[www.sfu.ca/~westerka/](http://www.sfu.ca/~westerka/) : Hildegard Westerkamp's homepage. / La page web de Hildegard Westerkamp. (eng)

[sono-design.com](http://sono-design.com) : "Sono Design compose, pour chaque projet, une équipe spécifique constituée de collaborateurs réguliers. Ce sont des professionnels chevronnés: scénaristes, rédacteurs, traducteurs, comédiens, graphistes, bruiteurs, concepteurs et monteurs sonores, éclairistes, réalisateurs vidéo, ingénieurs, compositeurs et musiciens." Conceptrice sonore: Diane LeBoeuf. (fr)

### **::RADIO::**

[ckut.ca](http://ckut.ca) : CKUT 90.3 FM McGill Radio is a non-profit campus community radio station owned by the students of McGill University. / CKUT 90.3 FM est une radio communautaire à but non-lucratif appartenant aux étudiants et étudiantes de l'Université McGill. (bil)

[www.cismfm.qc.ca](http://www.cismfm.qc.ca) : CISM 89,3 FM est une radio communautaire à but non-lucratif appartenant aux étudiants et étudiantes de l'Université de Montréal. (fr)

[CBC Radio on The Internet](#) : Brings you to your favourite CBC radio shows-- as well as all their other online efforts. (eng)

[radio-canada.ca/](http://radio-canada.ca/) : Ce site vous permet d'écouter vos émissions favorites de la Radio-Canada en plus de présenter leurs autres pages web. (fr)

[Radio-Canada International](#) : Continuous live audio programming in seven languages on Canadian topics. : Une programmation audio en direct et de façon continue qui discute en sept langues de sujets canadiens. (bil)

[Radio Stations on the Internet](#) : Lists all known sites on the Internet that publish information about broadcast radio stations. Une liste de tout les sites connus dans l'Internet qui publient de l'information sur les stations de radio-diffusion. (eng)

[www.radiosite.ca/training/index.html](http://www.radiosite.ca/training/index.html) : "Bottom line -- radio is about ideas. It's about skills. It's about learning -- and a big part of it is about teaching ourselves. We all need to take charge of our own learning curve. That's what this website is all about." / "Ligne de fond - la radio est á propos des idées. C'est á propos des capacités. C'est á propos de l'apprentissage ú et une grande part de tout cela est d'apprendre nous-mêmes. Nous avons tous besoin de prendre en charge notre courbe d'apprentissage. C'est de ça dont traite ce site web."(eng)

### **::FILM::**

[filmsound.org](http://filmsound.org) : A very comprehensive site dedicated to film sound production and design (aimed at both novice and expert). / Un site très complet dédié au design et á la production sonore destinée aux films (site visant les novices et les experts). (eng)

### **::ÉLECTROACOUSTIQUE::**

[cec.concordia.ca](http://cec.concordia.ca) : The Canadian Electroacoustic Community's webiste. Contains information concerning all CEC activities, including their project for young and emerging sound artists. / Le site web de la Communauté électroacoustique canadienne. Ce site contient des informations concernant toutes les activités du CEC, incluant leur projet pour les jeunes artistes du son de la relève. (bil)

### **:: RESSOURCES DE PRODUCTION::**

[epanorama.net](http://epanorama.net) : An enormous database of electronics links. N.B.: Audio (including studio techniques), Midi, Radio and Hi Fi links. / Une énorme base de données de hyperliens. N.B.: Liens portant sur l'audio (incluant des techniques de studio), le Midi, la radio et le Hi Fi. (eng)

[www.aes.org/resources/www-links/](http://www.aes.org/resources/www-links/) : The Audio Engineering Society list of links to audio resources on the web. Includes midi/electronic music, radio and broadcast, computers and audio and audio equipment links. / Le site



web de l'Audio Engineering Society (la Société d'ingénierie du son) propose des hyperliens vers des ressources audio dans l'Internet. Incluant des liens sur la musique midi/électronique, la radio et la diffusion, les ordinateurs et les équipements audio.(eng)

[digidesign.com](http://digidesign.com) : Website by makers of Protools. FAQ's, info about the software and a free downloadable (40mb) demo version. / Un site web par les fabricants de Protools. FAQ, informations sur le logiciel et la version de démonstration téléchargeable gratuitement (40mb). (eng)

[www.emf.org](http://www.emf.org): Electronic Music Foundation website. EMF's "mission is one of outreach and support. We aim to communicate knowledge of electronic music and art and its history to the public." / Site web de l'Electronic Music Foundation (la Fondation de musique électronique). La mission de l'EMF est une de support. Nous tentons de communiquer au public les connaissances sur la musique électronique, l'art et son histoire." (eng)

[samplearena.com](http://samplearena.com) : Lots of free samples, downloadable in a variety of formats. Lots of drum and bass sounds and breaks. Linked to Intermusic.com--a more comprehensive (but slow to download) site devoted to many aspects of production. / Plusieurs échantillons gratuits, téléchargeables dans une variété de formats. Beaucoup de sons et de breaks "drum and bass". En lien avec Intermusic.com-- un site plus complet (mais lent à télécharger) dévoué à plusieurs aspects de la production. (eng)

[www.qim.com](http://www.qim.com) : QUÉBEC INFO MUSIQUE Informations sur la musique du Québec (une banque de données, des biographies, une discographie, des archives sonores et d'autres hyperliens.). / QUÉBEC INFO MUSIQUE Information on Quebec music (a databank, biographies, a discography, sound archive and links). (bil)

[women1.htm](#) : Breaking the sound barrier: four top female audio professionals share the secrets of their success. / Brisant la barrière du son : quatre femmes professionnelles de haut calibre de l'audio partagent les secrets de leur succès. (eng)

[In the Studio](#) : Online info regarding Hildegard Westerkamp